

## REFERENCES AND CHAPTER NOTES

### Introduction:

<sup>1</sup> Coke, E. [1660] 1826. The Reports of Sir Edward Coke, Knt., in thirteen parts. A new edition <etc.> by J.H. Thomas and J.F. Fraser, in 6 vols. J. Butterworth & Sons, London <and> J. Cooke, Dublin, vol. 1 (pts. I-II), 669pp. The quotation is from page xxv.

<sup>2</sup> “Commonwealth” is an old English term for a polity formed for the common good, i.e., a republic. The term is used in the Preamble to the Massachusetts Constitution, further proclaiming that “The body politic is formed by a voluntary association of individuals: it is a social compact, by which the whole people covenants with each citizen, and each citizen with the whole people, that all shall be governed by certain laws for the common good”. Kentucky, Pennsylvania, and Virginia are also Commonwealths. The term is simply designational; it conveys no special status among the various states.

<sup>3</sup> The area now encompassed by the State of Maine became part of the Massachusetts Bay Colony in 1652. It remained part of Massachusetts until 1820, when, after a vote by Maine citizens, it became a state as part of the Missouri Compromise. For the purposes of this publication, DFW history is largely restricted to that within current state boundaries.

<sup>4</sup> U.S. Bureau of the Census, accessed at <http://2010.census.gov/2010census.data> on 27 November 2012.

<sup>5</sup> Total area (i.e., including surface water). Data from MassGIS 1999 landuse layer, as compiled from aerial photographs, provided by David Szczebak, Division of Fisheries & Wildlife, March 2013.

<sup>6</sup> County government has been abolished in eight counties (Berkshire, Essex, Franklin, Hampden, Hampshire, Middlesex, Suffolk, and Worcester), thus those counties exist simply as geographical entities and not as functioning political subdivisions.

<sup>7</sup> Massachusetts was the first state to create a governmental fisheries commission (“game” was not included until 1886), followed by California and New Hampshire in 1878 and Maine in 1880. See: Palmer, T.S. 1912. Chronology and index of the more important events in American game protection, 1776-1911. U.S. Department of Agriculture, Biological Survey, Bulletin 41, 62pp.

<sup>8</sup> The Executive Branch of the Massachusetts government has a cabinet structure serving under the Governor (G.L. c. 6, § 17A). Cabinet offices are termed “Executive Offices” and are headed by a Secretary. “Departments” (headed by a Commissioner) are subordinate to the Executive Office, and “Divisions” (headed by a Director) generally to the Department. “Bureaus” (headed by a Superintendent), when used, are subordinate entities within a Division.

- <sup>9</sup> Thomas, W.L. (ed.) 1956. *Man's Role in Changing the Face of the Earth*. University of Chicago Press, Chicago, Ill., 1193pp.
- <sup>10</sup> Detwyler, T.R. 1971. *Man's Impact on Environment*. McGraw-Hill Book Co., New York, 731pp.
- <sup>11</sup> Matthews, W.H., F.E. Smith and E.D. Goldberg (eds.) 1971. *Man's Impact on Terrestrial and Oceanic Ecosystems*. M.I.T. Press, Cambridge, Mass., 540pp.
- <sup>12</sup> Whitney, G.G. 1994. *From Coastal Wilderness to Fruited Plain: a History of Environmental Change in Temperate North America from 1500 to the Present*. Cambridge University Press, Cambridge, 485pp.
- <sup>13</sup> Diamond, J. 1987. The worst mistake in the history of the human race. *Discover* (May 1987):64-66.
- <sup>14</sup> Carroll, C.F. 1973. *The Timber Economy of Puritan New England*. Brown University Press, Providence, R.I., 221pp.
- <sup>15</sup> Cronon, W. 1983. *Changes in the Land. Indians, Colonists, and the Ecology of New England*. Hill & Wang, New York, 241pp.
- <sup>16</sup> Foster, D.R., G. Motzkin, D. Bernardos, and J. Cardoza. 2002. Wildlife dynamics in the changing New England landscape. *Journal of Biogeography* 29:1337-1357.
- <sup>17</sup> O'Keefe, J.F. and D.R. Foster. 1998. An ecological history of Massachusetts forests. Pages 19-66 in C.H.W. Foster (ed.) *Stepping Back to Look Forward. A History of the Massachusetts Forest*. Harvard University for the Harvard Forest, Petersham, Mass., 339pp.
- <sup>18</sup> Massachusetts General Laws c. 21 § 2, c. 131, and c. 131A.
- <sup>19</sup> Darey, G.L. and G.S. Jones. 1997. Massachusetts Division of Fisheries and Wildlife: historical and current perspectives. Massachusetts Division of Fisheries & Wildlife, 13pp.

"The Goodliest Continent That We Ever Saw": The 1600s:

- <sup>1</sup> Vaughan, E.T. (ed.) 1977. *New England's Prospect* [by] William Wood. University of Massachusetts Press, Amherst, Mass., 132pp. A modern translation of the second (1635) edition. Direct quotes are from a facsimile of the 1634 edition.
- <sup>2</sup> Salween, B. 1978. Indians of southern New England and Long Island: early period. Pages 160-176 in Trigger, B.G. (ed.) 1978. *Handbook of North American Indians*. Vol. 15. Northeast. Smithsonian Institution Press, Washington, D.C., 924pp.
- <sup>3</sup> Brassier, T.J. 1978. Early Indian-European contacts. Pages 78-88 in Trigger, B.G. (ed.) 1978. *Handbook of North American Indians*. Vol. 15. Northeast. Smithsonian Institution Press, Washington, D.C., 924pp.
- <sup>4</sup> Cronon, W. 1983. *Changes in the Land. Indians, Colonists, and the Ecology of New England*. Hill & Wang, New York, 241pp.

- <sup>5</sup> Lincoln, C.H. (ed.) 1913. *Narratives of the Indian Wars, 1675-1699*. Charles Scribner's Sons, New York, 312pp.
- <sup>6</sup> Leach, D.E. 1973. *Arms for Empire. A Military History of the British Colonies in North America, 1607-1763*. Macmillan Co., New York, 566pp.
- <sup>7</sup> Church, B. [1716] 1975. *Diary of King Philip's War, 1675-1676*. Pequot Press, Chester, Conn., 226pp.
- <sup>8</sup> Morison, S.E. 1971. *The European Discovery of America. The Northern Voyages, A.D. 500-1600*. Oxford University Press, New York, 712pp.
- <sup>9</sup> Brassier 1978:83-86.
- <sup>10</sup> Archer, G. 1843. The relation of Captain Gosnold's voyage to the north part of Virginia. *Collections of the Massachusetts Historical Society*, 3rd series, 8:72-81. The epigraph is from page 78.
- <sup>11</sup> Brereton, J. [1602] 1905. A briefe and true relation of the discoveries of the north part of Virginia. Pages 31-50 in G.P. Winship (ed.) *Sailors' Narratives of Voyages along the New England Coast, 1524-1624*. Houghton-Mifflin Co., Boston, 292pp.
- <sup>12</sup> Sassafras was highly valued in Europe as a treatment for ague, syphilis, and gonorrhea and for a brief period was the second highest (after tobacco) export from America. At the time of Gosnold's voyage, sassafras was bringing 3 s. per pound.
- <sup>13</sup> Brereton 1905:48-50.
- <sup>14</sup> Pring, M. [1624] 1908. A voyage set out from the Citie of Bristoll. Pages 343-352 in H.S. Burrage (ed.) *Early French and English Voyages, 1534-1608*. Charles Scribner's Sons, New York, 451pp.
- <sup>15</sup> Champlain, S. [1619] 1907. *Voyages of Samuel de Champlain, 1604-1618*. Charles Scribner's Sons, New York, 374pp.
- <sup>16</sup> Smith, J. [1614] 1905. A description of New England. Pages 213-247 in G.P. Winship (ed.) *Sailors' Narratives of Voyages along the New England Coast, 1524-1624*. Houghton-Mifflin Co., Boston, 292pp.
- <sup>17</sup> In the Julian calendar. Britain and the colonies did not change to the Gregorian calendar until 1752. The Gregorian was 10 days in advance of the Julian at its initial adoption in 1582, advancing to 11 days by 1752.
- <sup>18</sup> Bradford, W. [1856] 1908. *Bradford's History of Plymouth Plantation*. Charles Scribner's Sons, New York, 437pp.
- <sup>19</sup> Cheever, G.B. (ed.) 1849. Mourt's relation. *The Journal of the Pilgrims at Plymouth in New England in 1620*. J. Wiley, New York, 369pp.
- <sup>20</sup> Pulsifer, D. (ed.) 1861. *Records of the Colony of New Plymouth in New England*. v. 11. *Laws, 1623-1682*. William White, Boston, page 5.
- <sup>21</sup> Peterle, T.J. 1958. Game management in Scotland. *Journal of Wildlife Management* 22:221-231.
- <sup>22</sup> Lund, T.A. 1980. *American Wildlife Law*. University of California Press, Berkeley and Los Angeles, 179pp.

- <sup>23</sup> Threlfall, W. 1995. Conservation and wildlife management in Britain. Pages 27-74 in V. Geist and I. McTaggart-Cowan (eds.) *Wildlife Conservation Policy*. Detselig Enterprises Ltd., Calgary, Alberta, 308pp.
- <sup>24</sup> Deetz, P.S. and J. Deetz. 2000. Population of Plymouth town, county, and colony, 1620-1690. Accessed from [http://en.wikipedia.org/wiki/Plymouth\\_Colony](http://en.wikipedia.org/wiki/Plymouth_Colony) on 3 December 2012.
- <sup>25</sup> Dickinson, J. 1927. The Massachusetts Charter and the Bay Colony, 1628-1660. Pages 93-126 in A.B. Hart (ed.) *Commonwealth History of Massachusetts*. Vol. 1. The States History Co., New York, 608pp.
- <sup>26</sup> Winthrop, J. [1825-26] 1908. Winthrop's Journal "History of New England", 1630-1649. Charles Scribner's Sons, New York, 2 v.
- <sup>27</sup> Barry, J.S. 1855. *The History of Massachusetts*. Vol. 1. Phillips, Sampson & Co., Boston, 518pp. The reference is from page 190.
- <sup>28</sup> Curtis, J.G. 1927. Expansion and King Phillip's War. Pages 522-556 in A.B. Hart (ed.) *Commonwealth History of Massachusetts*. Vol. 1. The States History Co., New York, 608pp.
- <sup>29</sup> Winthrop, J. 1999. A model of Christian charity. Pages 28-43 in *American Sermons. The Pilgrims to Martin Luther King*. Library of America, New York, 939pp.
- <sup>30</sup> The reference is to Matthew 5:14.
- <sup>31</sup> Winthrop, J. [1644] 1968. John Winthrop: a negative view of a democracy. Pages 168-169 in M. Adler (ed.) *The Annals of America, 1493-1754*. Vol. 1. Discovering a new world. Encyclopedia Britannica, Inc., Chicago, 529pp.
- <sup>32</sup> Winthrop 1908: 2:237-239.
- <sup>33</sup> Hart, A.B. 1927. John Winthrop, Commonwealth Builder (1588-1649). Pages 159-190 in A.B. Hart (ed.) *Commonwealth History of Massachusetts*. Vol. 1. The States History Co., New York, 608pp.
- <sup>34</sup> Higginson, F. [1630] 1976. The Rev. Francis Higginson to his friends at Leicester. Pages 29-39 in E. Emerson (ed.) *Letters from New England. The Massachusetts Bay Colony, 1629-1638*. University of Massachusetts Press, Amherst, 263pp. Higginson's letter was later published as "*New-Englands Plantation*".
- <sup>35</sup> Promotional literature was a common feature of early exploration and travel accounts, designed to maximize opportunities and minimize detriments, so as to encourage future occupation and settlement of the described regions (thus benefitting the sponsors or promoters of the endeavor).
- <sup>36</sup> Morton, T. [1637] 1972. *New English Canaan, or New Canaan*. Arno Press, New York, 191pp.
- <sup>37</sup> Josselyn, J. [1672] 1977. *New-Englands Rarities Discovered*. University Microfilms, Ann Arbor, Mich., 114pp. A xerographic rendering.
- <sup>38</sup> Lindholdt, P.J. (ed.) 1988. John Josselyn, Colonial Traveler. A Critical Edition of *Two Voyages to New-England*. University Press of New England, Hanover, N.H., 221pp.

- <sup>39</sup> Morton 1972:74.
- <sup>40</sup> Vaughan 1977:47. The quote is from the 1634 edition.
- <sup>41</sup> Josselyn 1977:16.
- <sup>42</sup> Vaughan 1977:44. The quote is from the 1634 edition.
- <sup>43</sup> Lindholdt 1988:20.
- <sup>44</sup> Morison 1971:464-493.
- <sup>45</sup> Eccles, W.J. 1988. The fur trade in the colonial Northeast. Pages 324-350 in W.E. Washburn (ed.) *Handbook of North American Indians*. Vol. 4. History of Indian-White relations. Smithsonian Institution Press, Washington, D.C., 838pp.
- <sup>46</sup> Ray, A.J. 1987. The fur trade in North America: an overview from a historical geographical viewpoint. Pages 21-30 in M. Novak, J.A. Baker, M.E. Obbard, and B. Malloch (eds.) *Wild Furbearer Management and Conservation in North America*. Ministry of Natural Resources, Ontario, Canada, 1150pp.
- <sup>47</sup> See the Introduction, Note 2.
- <sup>48</sup> Bradford 1908:123.
- <sup>49</sup> Moloney, F.X. [1931] 1967. *The Fur Trade in New England, 1620-1676*. Archon Books, Hamden, Conn., 150pp.
- <sup>50</sup> De Rasieres, I. [1849] 1909. Letter of Isaak de Rasieres to Samuel Blommaert, 1628(?). Pages 97-115 in J.F. Jameson (ed.) *Narratives of New Netherlands, 1609-1664*. Charles Scribner's Sons, New York, 478pp.
- <sup>51</sup> Wampum was obtained from the coastal tribes, and used in trading with inland or more northerly tribes, who had no direct access to the molluscs used to create it.
- <sup>52</sup> A storehouse for trading with Indians. See the *Compact Oxford English Dictionary* (2nd ed.), page 2120.
- <sup>53</sup> Shurtleff, W.B. (ed.) 1853. *Records of the Governor and Company of the Massachusetts Bay in New England*. Vol. 1, 1628-1641. W. White, Boston, page 93.
- <sup>54</sup> Shurtleff 1853:96.
- <sup>55</sup> Shurtleff 1853:140.
- <sup>56</sup> Greenbie, S. 1929. *Frontiers and the Fur Trade*. The John Day Company, New York, 235pp.
- <sup>57</sup> Judd, S. 1857. The fur trade on Connecticut River in the seventeenth century. *New England Historic & Genealogical Register* 11:217-219.
- <sup>58</sup> An Act for continuing and amending an act made in the first year of his present Majesty intituled "An Act for allowing necessary supplies to the Eastern Indians and for regulating the trade with them and preventing abuses therein". Chapter 32, *Province Laws of 1763/64 in Acts and Resolves, Public and Private, of the Province of Massachusetts Bay*, vol. 4, 1757-1768, page 690, Wright & Potter, Boston, 1890.
- <sup>59</sup> Vaughan 1977:46. The quote is from the 1634 edition.



- <sup>60</sup> Shurtleff, W.B. (ed.) 1853. Records of the Governor and Company of the Massachusetts Bay in New England. Vol. 1, 1628-1641. W. White, Boston, page 81. "It is ordered, that whereas eũy Englishe man that killeth a wolfe in any pte within the lymitts of this pattent shall haue allowed him 1<sup>d</sup> for eũy beast & horse, & ob. for eũy weane swyne & goate in eũy plantacõn, to be leiued by the constables of the s<sup>d</sup> plantacõns".
- <sup>61</sup> Johnson, C. 1932. Historic Hampshire in the Connecticut Valley. Milton Bradley Co., Springfield, Mass., 406pp.
- <sup>62</sup> Judd, S. [1863] 1905. The history of Hadley, including the Early History of Hatfield, South Hadley, Amherst, and Granby, Massachusetts. H.R. Huntting & Co., Springfield, Mass., 504+205pp.
- <sup>63</sup> McCabe, R.E. and T.R. McCabe. 1984. Of slings and arrows: an historical retrospection. Pages 19-72 in L.K. Halls (ed.) White-tailed Deer. Ecology and Management. Stackpole Books, Harrisburg, Pa., 870pp.
- <sup>64</sup> Allen, G.M. 1930. History of the Virginia deer in New England. Proceedings of the New England Game Conference for 1929:19-41.
- <sup>65</sup> "An Act to restrain the exportation of raw hides and skins out of the Province of the Massachusetts Bay, and for the better preservation and increase of deer in the said province". Chap. 19, Province Laws of 1693/4 in Acts and Resolves, Public and Private, of the Province of the Massachusetts Bay <etc.>. Vol. 1. Wright & Potter, Boston, 1865, pages 152-153.
- <sup>65</sup> "An Act for the better preservation and increase of deer within this Province". Chap. 21, Province Laws of 1698 in Acts and Resolves, Public and Private, of the Province of Massachusetts Bay <etc.>. Vol. 1. Wright and Potter, Boston, 1869, pages 355-356.
- <sup>67</sup> A bailiff, steward, or overseer appointed to fulfill a specific task.
- <sup>68</sup> Jensen, A.C. 1972. The Cod. The Uncommon History of a Common Fish and its Impact on American Life from Viking Times to the Present. Thomas Y. Crowell Co., New York, 182pp.
- <sup>69</sup> Rostlund, E. 1952. Freshwater Fish and Fishing in Native North America. University of California Publications in Geography 9:1-314.
- <sup>70</sup> Kendall, W.C. 1935. The Fishes of New England. The Salmon Family. Part 2. The Salmon. Memoirs of the Boston Society of Natural History 9:1-166.
- <sup>70</sup> Vaughan 1977:53 & 55.
- <sup>72</sup> Sturgeon was considered to be a "royal" fish and highly desired in England. See [http://en.wikipedia.org/wiki/Royal\\_fish](http://en.wikipedia.org/wiki/Royal_fish), accessed on 7 December 2012.
- <sup>73</sup> Bradford 1908:205-206.
- <sup>74</sup> Bradford 1908:258.
- <sup>75</sup> King, H.R. 1994. Cape Cod and Plymouth Colony in the Seventeenth Century. University Press of America, Lanham, Md., 307pp.
- <sup>76</sup> King 1994:210.
- <sup>77</sup> Secretary of the Commonwealth. 1887. A Collection of the Laws Relating to Inland

Fisheries in Massachusetts, 1623-1886. Wright & Potter Printing Co., Boston, 404pp.

<sup>78</sup> Secretary of the Commonwealth 1887:6-7.

<sup>79</sup> Magra, C.P. 2006. The New England cod fishing industry and maritime dimensions of the American Revolution. Dissertation, University of Pittsburgh, Pittsburgh, Pa., pages 117-118.

<sup>80</sup> Magra 2006:121.

<sup>81</sup> Gray, F.C. 1843. On the early laws of Massachusetts; with the Code adopted in 1841, and called *The Body of Liberties*, now first printed. Collections of the Massachusetts Historical Society 8(3rd series):191-237.

<sup>82</sup> The Body of Liberties was revoked by King Charles II in 1684, reinstituted by King James II in 1686, and remained in effect until replaced in 1691 by the Provincial Charter.

<sup>83</sup> Whittlesey, J.J. 1932. Laws of the Seashore, Tidewaters, and Great Ponds in Massachusetts and Maine (under the colony ordinance of 1641-47). The Murray Printing Co., Cambridge, Mass., 90pp.

<sup>84</sup> Massachusetts Water Resources Commission. 1970. Compilation and summarization of the Massachusetts general laws, special laws, pertinent court decisions <etc.> relating to water and water rights. Mass. Water Resources Commission, Boston, 269pp.

<sup>85</sup> "Great Ponds" are generally natural (not impounded or constructed) lakes and ponds 20 acres or greater for fishing, fowling or navigation. See c. 384, St. 1869 and G.L. c. 91, §§ 1, 18A, & 35 and c. 131, §§ 1 & 45. For great ponds between 10 and 20 acres in extent, see the Opinion of the Attorney General, 11 December 1916. See also c. 384, § 8, St. 1869.

<sup>86</sup> Hoskins, H.L. 1927. Trade and shipping (1630-1689). Pages 442-468 in A.B. Hart (ed.) Commonwealth History of Massachusetts. Vol. 1. The States History Co., New York, 608pp.

<sup>87</sup> King 1994:208.

<sup>88</sup> Lilliard, R.G. 1947. The Great Forest. A.A. Knopf & Co., New York, 399pp.

<sup>89</sup> Josselyn 1977:4.

<sup>90</sup> Carroll, C.F. 1973. The Timber Economy of Puritan New England. Brown University Press, Providence, R.I., 221pp. The reference is from page 28.

<sup>91</sup> Higginson 1976:32.

<sup>92</sup> Vaughan 1977:38. The quote is from the 1634 edition.

<sup>93</sup> Morton 1972:62 & 63.

<sup>94</sup> Carroll 1973:85.

<sup>95</sup> Bradford 1908:123 & 157.

<sup>96</sup> While possible that "clapbord" referred to cedar clapboards for wainscoting rooms, it

is more likely that the items were barrel staves. See Carroll 1973:171 and the Compact Oxford English Dictionary (2nd ed.), page 264.

<sup>97</sup> Tager, J. and R.W. Wilkie. 1991. Puritan Commonwealth, 1620-1691. Pages 16-19 in R.W. Wilkie and J. Tager (eds.) *Historical Atlas of Massachusetts*. University of Massachusetts Press, Amherst, Mass., 152pp.

<sup>98</sup> Carroll 1973:18.

<sup>99</sup> Gordon, N.M. 1998. The economic uses of Massachusetts forests. Pages 67-100 in C.H.W. Foster (ed.) *Stepping Back to Look Forward. A History of the Massachusetts Forest*. Harvard University for the Harvard Forest, Petersham, Mass., 339pp.

<sup>100</sup> Carroll 1973:77-78.

<sup>101</sup> Carroll 1973:64-65.

<sup>102</sup> Hoskins 1927:447-448.

<sup>103</sup> Foster, C.H.W. 1998. The Massachusetts forest: an historical overview. Pages 3-18 in C.H.W. Foster (ed.) *Stepping Back to Look Forward. A History of the Massachusetts Forest*. Harvard University for the Harvard Forest, Petersham, Mass., 339pp.

<sup>104</sup> Gordon 1998:72-74.

<sup>105</sup> Carroll 1973:204.

<sup>106</sup> Carroll 1973:110.

<sup>107</sup> Judd 1905:99.

<sup>108</sup> A platform on which hay or straw is stacked, i.e., in context, the timbers from which a staddle is constructed.

<sup>109</sup> Judd 1905:100.

<sup>110</sup> Carroll 1973:127.

<sup>111</sup> Jerneagan, M.W. 1928. The Province Charter (1689-1715). Pages 1-28 in A.N. Hart (ed.) *Commonwealth History of Massachusetts*. Vol. 2. The States History Company, New York, 592pp.

<sup>112</sup> Mileur, J.N., J. Tager, R.W. Wilkie, and N.R. Chrisman. 1991. Political organization. Pages 58-79 in R.W. Wilkie and J. Tager (eds.) *Historical Atlas of Massachusetts*. University of Massachusetts Press, Amherst, Mass., 152pp.

<sup>113</sup> Carroll 1973:128.

### "They Destroy All That Comes In Their Way": The 1700s:

<sup>1</sup> "[The settlers] in clearing the ground for cultivation they destroy all that comes in their way...which utterly destroys woods of trees which require an hundred years to come to perfection...". Carman, H.J. (ed.) 1939. *American Husbandry*. Columbia University Press, New York, 582pp. The quotation is from page 61.

<sup>2</sup> Quoted in: Snow, E.R. 1973. *The Lighthouses of New England, 1716-1973*. Dodd,



Mead & Co., New York, 363pp. The quotation is from page 185.

<sup>3</sup> Eccles, W.J. 1988. The fur trade in the colonial Northeast. Pages 324-350 in W.E. Washburn (ed.) *Handbook of North American Indians*. Vol. 4. History of Indian-White relations. Smithsonian Institution Press, Washington, D.C., 838pp.

<sup>4</sup> Ray, A.J. 1987. The fur trade in North America: an overview from a historical geographical viewpoint. Pages 21-30 in M. Novak, J.A. Baker, M.E. Obbard, and B. Malloch (eds.) *Wild Furbearer Management and Conservation in North America*. Ministry of Natural Resources, Ontario, Canada, 1150pp.

<sup>5</sup> Martin, C. 1978. *Keepers of the Game. Indian-animal Relationships and the Fur Trade*. University of California Press, Berkeley and Los Angeles, 226pp. The quotation is from page 2.

<sup>6</sup> Krech, S. III (ed.) 1981. *Indians, Animals, and the Fur Trade. A Critique of Keepers of the Game*. University of Georgia Press, Athens, Ga., 208pp.

<sup>7</sup> Krech, S. III. 1999. *The Ecological Indian. Myth and History*. W.W. Norton & Co., New York, 318pp.

<sup>8</sup> Richard Eburne (1624), in Carroll, C.F. 1973. *The Timber Economy of Puritan New England*. Brown University Press, Providence, R.I., 221pp. The quotation is from page 126.

<sup>9</sup> Carroll 1973:127.

<sup>10</sup> Mileur, J.N., J. Tager, R.W. Wilkie, and N.R. Chrisman. 1991. Political organization. Pages 58-79 in R.W. Wilkie and J. Tager (eds.) *Historical Atlas of Massachusetts*. University of Massachusetts Press, Amherst, Mass., 152pp.

<sup>11</sup> Leach, D.E. 1973. *Arms for Empire. A Military History of the British Colonies in North America, 1607-1763*. Macmillan Co., New York, 566pp.

<sup>12</sup> Plimpton, G.A. 1928. French and Indian wars (1741-1763). Pages 419-454 in A.N. Hart (ed.) *Commonwealth History of Massachusetts*. Vol. 2. The States History Company, New York, 592pp.

<sup>13</sup> Alden, J.R. 1975. *A History of the American Revolution*. A.A. Knopf, New York, 541pp.

<sup>14</sup> The Massachusetts Constitution is the oldest functioning written constitution in continuous effect since its ratification.

<sup>15</sup> Richard Coote, 1st Earl of Bellomont (1700), in Norton, T.E. 1974. *The Fur Trade in Colonial New York, 1686-1776*. University of Wisconsin Press, Madison, 243pp. The quotation is from page 100.

<sup>16</sup> Freeland, M.D. 1894. *The Records of Oxford, Mass.* J. Munsell Sons, Albany, N.Y., 429pp. The quotation is from page 170.

<sup>17</sup> Norton 1974:92.

<sup>18</sup> Emmons, E. 1840. A report on the quadrupeds of Massachusetts in *Reports on the Herbaceous Plants and on the Quadrupeds of Massachusetts*. Published agreeably to an Order of the Legislature. Commissioners on the Zoological and Botanical Survey of

the State, Folsom, Wells & Thurston, Cambridge, Mass., 277+86pp.

<sup>19</sup> Shaw, S.P. 1948. The beaver in Massachusetts. A research and management study. Massachusetts Department of Conservation Division of Fisheries & Game Research Bulletin 11, 44pp.

<sup>20</sup> Beard, D.B., V.H. Cahalane, H.H.T. Jackson, and B.H. Thompson. 1942. *Fading Trails. The Story of Endangered American Wildlife.* Macmillan Co., New York, 279pp.

<sup>21</sup> Allen, M.O. 1860. The History of Wenham, Civil and Ecclesiastical, from the Settlement in 1639 to 1860. Bazin & Chandler, Boston, 220pp. The reference is from page 67.

<sup>22</sup> Coffin, J. 1845. A Sketch of the History of Newbury, Newburyport, and West Newbury, from 1635 to 1845. Samuel G. Drake, Boston, 416pp. The reference is from page 256.

<sup>23</sup> Ballard, H.H. 1885. Town of Lenox. Pages 182-219 in *History of Berkshire County, Massachusetts, with Biographical Sketches of its Prominent Men.* Vol. 2. J.B. Beers & Co., New York, 708pp. The reference is from pages 182-183.

<sup>24</sup> Bryant, L.D. and C. Maser. 1982. Classification and distribution. Pages 1-59 in J.W. Thomas and D.E. Toweill (eds.) *Elk of North America. Ecology and Management.* Stackpole Books, Harrisburg, Pa., 698pp.

<sup>25</sup> Allen, J.A. 1876. The extirpation of the larger indigenous mammals of the United States. *Penn Monthly* (Oct.):794-806.

<sup>26</sup> Adams, C.F. (ed.) 1883. *The New English Canaan of Thomas Morton.* The Prince Society, Boston, 381pp. The reference is from the footnote on page 200.

<sup>27</sup> Nourse, H.S. 1894. *History of the Town of Harvard, Massachusetts, 1732-1893.* Printed for Warren Hapgood, Harvard, Mass., 605pp. The reference is from page 74.

<sup>28</sup> Sewall, S. [1878-82] 1973. *The diary of Samuel Sewall, 1674-1729.* Farrar, Strauss & Giroux, New York, 2 v. The quotations are from pages 380 and 454.

<sup>29</sup> Miller, B.K. and D. Sherro. 1987. Factors influencing the disappearance of the eastern wild turkey from southern New England in the 19th century. *Transactions of the Northeast Section of The Wildlife Society* 44:8-15.

<sup>30</sup> Judd, S. [1863] 1905. *The History of Hadley, including the Early History of Hatfield, South Hadley, Amherst, and Granby, Massachusetts.* H.R. Huntting & Co., Springfield, Mass., 504+205pp. The references are from pages 346-354 and 358.

<sup>31</sup> Bennet, in Earle, A.M. [1893] 1973. *Customs and Fashions in Old New England.* Charles E. Tuttle Co., Rutland, Vt., 387pp. The reference is from pages 157-158.

<sup>32</sup> Nuttall, T. 1840. *A Manual of the Ornithology of the United States and of Canada: the Land Birds.* Hilliard, Gray & Co., Boston, 832pp. The quotation is from page 800.

<sup>33</sup> Forbush, E.H. 1912. *A History of the Game-birds, Wild-fowl, and Shore Birds of Massachusetts and Adjacent States.* Massachusetts State Board of Agriculture, Boston, 622pp.

<sup>34</sup> "An Act for the better regulation of fowling", c. 13, *Province Laws of 1710-11.*

<sup>35</sup> Earle 1973:314-316.

<sup>36</sup> Allen, G.M. 1930. History of the Virginia deer in New England. Proceedings of the New England Game Conference for 1929:19-41.

<sup>37</sup> Brown, M.L. 1980. Firearms in Colonial America. The Impact on History and Technology, 1492-1792. Smithsonian Institution Press, Washington, D.C., 448pp.

<sup>38</sup> Bellesiles, M.A. 2000. Arming America. The Origins of a National Gun Culture. A.A. Knopf, New York, 603pp.

<sup>39</sup> Lindgren, J. 2002. Fall from Grace: Arming America and the Bellesiles scandal. Yale Law Journal 111:2195-2249.

<sup>40</sup> Cramer, C.E. 2004. Colonial firearms regulation. Journal on Firearms and Public Policy 16:1-44.

<sup>41</sup> Fobes, P. 1794. A topographical description of the town of Raynham, in the County of Bristol, February 6, 1793. Collections of the Massachusetts Historical Society 3 (1st series):166-175. Fowling Pond was drained in the 18th century.

<sup>42</sup> Seccombe, J. 1743. Business and diversion innocent to God. A discourse utter'd in part at Ammauskeag-Falls, in the fishing season. S. Kneeland & T. Green, Boston, 21pp.

Accessed from <http://www.izaak.unh.edu/dip/seccombe> on 20 December 2012.

<sup>43</sup> Usher, A.P. 1928. Colonial business and transportation. Pages 386-418 in A.N. Hart (ed.) Commonwealth History of Massachusetts. Vol. 2. The States History Company, New York, 592pp.

<sup>44</sup> Jensen, A.C. 1972. The Cod. The Uncommon History of a Common Fish and its Impact on American Life from Viking Times to the Present. Thomas Y. Crowell Co., New York, 182pp.

<sup>45</sup> A weight of 100 pounds (100 kg in the metric system). Pronounced “kwintəl”, it lends itself by corruption to the idiom “A fine kettle of fish”.

<sup>46</sup> Woodbury, C.L. 1880. The relation of the fisheries to the discovery and settlement of North America. A. Mudge & Sons, Boston, 26pp. The quotation is from page 26.

<sup>47</sup> Starbuck, A. 1878. History of the American Whale Fishery from its Earliest Inception to the Year 1876. Published by the author, Waltham, Mass., 768pp.

<sup>48</sup> Judd 1905:313-315.

<sup>49</sup> T. Lyman and A.A. Reed. 1865. Report of the Commissioners concerning the obstructions to the passage of fish in the Connecticut and Merrimack Rivers. Senate Document 8, Boston, 59pp. The reference is from page 39.

<sup>50</sup> Secretary of the Commonwealth. 1887. A Collection of the Laws Relating to Inland Fisheries in Massachusetts, 1623-1886. Wright & Potter Printing Co., Boston, 404pp.

<sup>51</sup> “An Act in addition to an Act made to prevent the Destruction of the Fish called Alewives, and other Fish” in Secretary of the Commonwealth 1887:9-10.

<sup>52</sup> Storer, D.H. 1839. Dr. Storer’s report on the fishes. Pages 5-202 in Report on the

Fishes, Reptiles, and Birds of Massachusetts. Published agreeably to an Order of the Legislature. Commissioners on the Zoological and Botanical Survey of the State, Dutton & Wentworth, Boston, 426pp. The quotation is from page 104.

<sup>53</sup> Tager, J. and R.W. Wilkie. 1991. Royal Colony, 1691-1765. Pages 20-23 in R.W. Wilkie and J. Tager (eds.) Historical Atlas of Massachusetts. University of Massachusetts Press, Amherst, Mass., 152pp.

<sup>54</sup> O'Keefe, J.F. and D.R. Foster. 1998. An ecological history of Massachusetts forests. Pages 19-66 in C.H.W. Foster (ed.) Stepping Back to Look Forward. A History of the Massachusetts Forest. Harvard University for the Harvard Forest, Petersham, Mass., 339pp.

<sup>55</sup> Foster, D., G. Motzkin, J. O'Keefe, E. Boose, D. Orwig, J. Fuller, and B. Hall. 2004. The environmental and human history of New England. Pages 43-100 in D. Foster and J.D. Aber. 2004. Forests in Time. The Environmental Consequences of 1,000 years of Change in New England. Yale University Press, New Haven, Conn., 477pp.

<sup>56</sup> Sly, J.F. 1928. Geographical expansion and town system. Pages 96-12 in A.N. Hart (ed.) Commonwealth History of Massachusetts. Vol. 2. The States History Company, New York, 592pp.

<sup>57</sup> Judd 1905:108 and 290.

<sup>58</sup> Carman, H.J. (ed.) 1939. American Husbandry. Columbia University Press, New York, 582pp. The quotation is from page 61.

<sup>59</sup> Walcott, R.R. 1936. Husbandry in colonial New England. New England Quarterly 9:218-252. The quotation is from page 226.

<sup>60</sup> Whitney, P. 1793. The History of the County of Worcester, in the Commonwealth of Massachusetts. Isaiah Thomas, Worcester, Mass., 339pp. The quotation is from page 146.

<sup>61</sup> Williams, M. 1989. Americans and Their Forests. A historical overview. Cambridge University Press, Cambridge, U.K., 599pp.

<sup>62</sup> Bureau of the Census. 1908. Heads of Families at the First Census of the United States Taken in the Year 1790. Massachusetts. Government Printing Office, Washington, D.C., 363pp.

<sup>63</sup> Although Maine was still part of Massachusetts in 1790 (see the Introduction, Note 2), the Census Bureau separated Maine's data from that of Massachusetts in the 1908 published version of the 1790 census records.

#### *Non Nobis Solum: 1800-1865:*

<sup>1</sup> "Not for ourselves alone", the motto of the New York Association for the Protection of Game, one of the first statewide game protective organizations, organized in 1844 under the leadership of Robert B. Roosevelt, Theodore's uncle.

<sup>2</sup> Emerson, R.W. [1849] 1983. Nature. Pages 5-49 in Essays and Lectures. Library of America, New York, 1150pp. The quotation is from page 12.

- <sup>3</sup> Hubbard, C.C. 1929. Massachusetts state government (1789-1820). Pages 440-470 in A.N. Hart (ed.) *Commonwealth History of Massachusetts*. Vol. 3. The States History Company, New York, 582pp.
- <sup>4</sup> Tager, J. and R.W. Wilkie. 1991a. Revolutionary and Federalist ages, 1765-1815. Pages 24-27 in R.W. Wilkie and J. Tager (eds.) *Historical Atlas of Massachusetts*. University of Massachusetts Press, Amherst, Mass., 152pp. The last two towns to be settled in Massachusetts were Monroe (1800) and Erving (1801).
- <sup>5</sup> Bartlett, R.J. 1929. Commerce and industry (1789-1820). Pages 526-547 in A.N. Hart (ed.) *Commonwealth History of Massachusetts*. Vol. 3. The States History Company, New York, 582pp.
- <sup>6</sup> Tager, J. and R.W. Wilkie. 1991b. Industrial beginnings, 1815-1860. Pages 28-33 in R.W. Wilkie and J. Tager (eds.) *Historical Atlas of Massachusetts*. University of Massachusetts Press, Amherst, Mass., 152pp.
- <sup>7</sup> The U.S. National Armory at Springfield was in operation from 1777-1968, producing a wide variety of long arms for the Army. The activities at the Arsenal encouraged other manufacturers, and Springfield became known as a center for invention and innovation.
- <sup>8</sup> Gilbert, A.W. 1930. Massachusetts agriculture (1820-1889). Pages 372-400 in A.N. Hart (ed.) *Commonwealth History of Massachusetts*. Vol. 4. The States History Company, New York, 626pp.
- <sup>9</sup> Bidwell, P.W. and J.I. Falconer. 1925. *History of Agriculture in the Northern United States*. Carnegie Institute, Washington, D.C., 512pp.
- <sup>10</sup> Foster, D., G. Motzkin, J. O'Keefe, E. Boose, D. Orwig, J. Fuller, and B. Hall. 2004. The environmental and human history of New England. Pages 43-100 in D. Foster and J.D. Aber. 2004. *Forests in Time. The Environmental Consequences of 1,000 years of Change in New England*. Yale University Press, New Haven, Conn., 477pp.
- <sup>11</sup> Now the University of Massachusetts (Amherst).
- <sup>12</sup> Tager, J. and R.W. Wilkie. 1991c. Industrialization and urbanization, 1860-1900. Pages 34-37 in R.W. Wilkie and J. Tager (eds.) *Historical Atlas of Massachusetts*. University of Massachusetts Press, Amherst, Mass., 152pp.
- <sup>13</sup> Tager, J. and R.W. Wilkie. 1991d. Royal Colony, 1691-1765. Pages 20-23 in R.W. Wilkie and J. Tager (eds.) *Historical Atlas of Massachusetts*. University of Massachusetts Press, Amherst, Mass., page 20, and Tager and Wilkie 1991a:24.
- <sup>14</sup> Apess, W. 1835. *Indian Nullification of the Unconstitutional Laws of Massachusetts, Relative to the Marshpee Tribe*. Jonathan Howe, Boston, 168pp. The quotations are from pages 21 and 82.
- <sup>15</sup> Pomeroy, S.C. [1862] 1966. [Extract from] Speech of the Honorable S.C. Pomeroy, of Kansas, on the Homestead Bill, May 5, 1862. Pages 301-303 in Richmond, R.W. and R.W. Mardock (eds.) *A Nation Moving West: Readings in the History of the American Frontier*. University of Nebraska Press, Lincoln, Nebr., 366pp. Pomeroy was born in Southamptton, Mass., and died in Whitinsville, Mass. In 1871, he introduced the Act of Dedication bill which later led to the formation of Yellowstone National Park. The quotation is from page 302.



- <sup>16</sup> Turner, F.J. [1894] 1966. *The Significance of the Frontier in American History*. University Microfilms, Ann Arbor, Mich. A facsimile reprint. The quotation is from page 227.
- <sup>17</sup> Coxe, T. [1794] 1965. *A view of the United States of America <etc.>* Augustus M. Kelley, New York, 513pp. A facsimile reprint. The quotation is from page 452.
- <sup>18</sup> Dwight, T. [1823] 1969. *Travels in New England and New York*. Belknap Press of Harvard University Press, Cambridge, Mass., 4 v. The quotations are from vol. 1, pages 75 and 258.
- <sup>19</sup> Hawes, A.F. 1923. New England forests in retrospect. *Journal of Forestry* 21:209-224.
- <sup>20</sup> O'Keefe, J.F. and D.R. Foster. 1998. An ecological history of Massachusetts forests. Pages 19-66 in C.H.W. Foster (ed.) *Stepping Back to Look Forward. A History of the Massachusetts Forest*. Harvard University for the Harvard Forest, Petersham, Mass., 339pp.
- <sup>21</sup> Emerson, G.B. 1846. *Report on the Trees and Shrubs Growing Naturally in the Forests of Massachusetts*. Published agreeably to an Order of the Legislature. Commissioners on the Zoological and Botanical Survey of the State, Dutton & Wentworth, Boston, Mass., 547pp. The quotation is from page 1.
- <sup>22</sup> Marsh, G.P. [1864] 1965. *Man and Nature or, Physical Geography as Modified by Human Action*. Belknap Press of Harvard University Press, Cambridge, Mass., 472pp. The quotation is from page 279.
- <sup>23</sup> Thoreau, H.D. [1860] 1887. The succession of forest trees. Pages 33-52 in *The Succession of Forest Trees and Wild Apples*. Houghton-Mifflin Co., Boston, 84pp. The quotation is from page 46.
- <sup>24</sup> Foster, D.R., G. Motzkin, D. Bernardos, and J. Cardoza. 2002. Wildlife dynamics in the changing New England landscape. *Journal of Biogeography* 29:1337-1357.
- <sup>25</sup> Askins, R.A. 1993. Population trends in grassland, shrubland, and forest birds in eastern North America. *Current Ornithology* 11:1-34.
- <sup>26</sup> Forbush, E.H. 1927. *The Birds of Massachusetts and Other New England States*. v. 2. Massachusetts Department of Agriculture, Boston, 461pp. (e.g., bobolink. See page 414).
- <sup>27</sup> Litvaitis, J.A. 1993. Response of early successional vertebrates to historic changes in land use. *Conservation Biology* 7:866-873.
- <sup>28</sup> Vecellio, G.M., R.D. Deblinger, and J.E. Cardoza. 1993. Status and management of moose in Massachusetts. *Alces* 29:1-7.
- <sup>29</sup> Anonymous. 1896. *The History of the Town of Amherst, Massachusetts*. Carpenter & Morehouse, Amherst, 640+263pp. [two parts bound as 1] The reference is from pt. 1, page 31.
- <sup>30</sup> Allen, J.A. 1869. Catalogue of the mammals of Massachusetts; with a critical review of the species (Cetacea). *Bulletin of the Museum of Comparative Zoology* 1(8):143-252.
- <sup>31</sup> Forbush, E.H. 1912. *A History of the Game-birds, Wild-fowl, and Shore Birds of*

Massachusetts and Adjacent States. Massachusetts State Board of Agriculture, Boston, 622pp.

<sup>32</sup> Stoner, D. 1950. Extant New York state specimens of the Adirondack cougar. New York State Museum Circular 25, 34pp. The reference is from pages 27-28.

<sup>33</sup> Laws of the Commonwealth of Massachusetts, Chapter 56, Acts of 1830 (effective February 1831), "An Act to incorporate the Boston Society of Natural History".

<sup>34</sup> Resolves of the General Court of the Commonwealth of Massachusetts, Chapter 73, Resolves of 1837, "Resolve for a further geological survey of this Commonwealth".

<sup>35</sup> D.H. Storer and W.B.O. Peabody "Reports on the fishes, reptiles, and birds" (1839); C. Dewey and E. Emmons "Reports on the herbaceous plants and on the quadrupeds" (1840); T.W. Harris "Report on the insects, injurious to vegetation (1841); A.A. Gould "Report on the invertebrata, comprising the mollusca, crustacea, annelida, and radiata" (1841); and G.A. Emerson "Report on the trees and shrubs growing naturally in the forests" (1846).

<sup>36</sup> Doughty, T. [1830] 1930. Characteristics of a true sportsman. Pages 7-9 in J.C. Phillips and L.W. Hill (eds.) Classics of the American Shooting Field. Houghton-Mifflin Co., Boston, 214pp.

<sup>37</sup> Fisher, S.G. 1911. The True Daniel Webster. J.B. Lippincott Co., Philadelphia, 516pp.

<sup>38</sup> Hammond, S.H. [1857] 1967. Wild Northern Scenes; or Sporting Adventures with the Rifle and the Rod. Arno Press, New York, 341pp. The quotation is from page 83.

<sup>39</sup> Jensen, A.C. 1972. The Cod. The Uncommon History of a Common Fish and its Impact on American Life from Viking Times to the Present. Thomas Y. Crowell Co., New York, 182pp.

<sup>40</sup> Goode, G.B. (ed.) 1887. The Fisheries and Fisheries Industries of the United States. Section V. History and methods of the fisheries. Vol. 1. U.S. Government Printing Office, Washington, D.C., 881pp. The references are from pages 234 and 277.

<sup>41</sup> Curtis, J.G. 1930. Industry and transportation (1820-1889). Pages 401-433 in A.N. Hart (ed.) Commonwealth History of Massachusetts. Vol. 4. The States History Company, New York, 626pp.

<sup>42</sup> Koch, A.C. [1847] 1972. Journey through a Part of the United States of America in the Years 1844 to 1846. Southern Illinois University Press, Carbondale, Ill., 177. The reference is from page 19.

<sup>43</sup> Starbuck, A. 1878. History of the American Whale Fishery from its Earliest Inception to the Year 1876. Published by the author, Waltham, Mass., 768pp. The references are from pages 95 and 702.

<sup>44</sup> Smith, J.V.C. [1833] 1970. Natural History of the Fishes of Massachusetts, Embracing a Practical Essay on Angling. Freshet Press, Rockville Centre, N.Y., 400pp. The quotation is from page 323.

<sup>45</sup> Fisher 1911:190.

<sup>46</sup> Tisdale, S.T. 1871. Fish culture in New England. Pages 24-28 in Fifth annual report of the Commissioners on Inland Fisheries [for 1870]. Wright and Potter, State Printers, Boston, 77pp. The quotations are from pages 24-25. This was the smallmouth bass, *Micropterus dolomieu*. Largemouth bass were introduced sometime during the next 10-12 years from an unknown source.

<sup>47</sup> This is the village (formerly a Plymouth Colony “plantation”) in Wareham, Bristol County, not the incorporated Town of the same name in Hampden County.

<sup>48</sup> Secretary of the Commonwealth. 1887. A Collection of the Laws Relating to Inland Fisheries in Massachusetts, 1623-1886. Wright & Potter Printing Co., Boston, 404pp.

<sup>49</sup> See (e.g.) c. 36, St. 1849, and c. 150, St. 1864.

<sup>50</sup> “An Act regulating the hunting of deer”, c. 15, St. 1802.

<sup>51</sup> An Act to prevent the destruction of certain useful birds at unseasonable times of the year”, c. 103, St. 1818.

<sup>52</sup> This was apparently the first legislation in the United States to establish a closed season on songbirds.

<sup>53</sup> “An Act to prevent the destruction of birds on salt marshes at particular times of the year”, c. 10, St. 1821.

<sup>54</sup> “An Act in addition to an act entitled “An Act to prevent the destruction of certain useful birds at unseasonable times of the year”, c. 69, St. 1831.

<sup>55</sup> “An Act to prevent the destruction of certain birds”, c. 136, St. 1835.

<sup>56</sup> “An Act for the preservation of the Grouse or Heath Hen”, c. 170, St. 1837.

<sup>57</sup> “An Act for the better protection of certain birds”, c. 158, St. 1849.

<sup>58</sup> “An Act for the better preservation of useful birds”, c. 197, St. 1855.

<sup>59</sup> *Martin v. Waddell*, 41 U.S. (16 Pet.) 367 (1842)

<sup>60</sup> Bean, M.J. and M.J. Rowland. 1997. The Evolution of National Wildlife Law (3rd ed.) Praeger Publishers, Westport, Conn., 544pp. See pages 10-12.

<sup>61</sup> “Resolve concerning the obstruction to the passage of fish in the Connecticut and Merrimack Rivers”, c. 45, Resolves of 1865.

<sup>62</sup> The concept of “commissioners” was used in the earlier zoological and botanical survey of the state (See Note 34 above) and in the investigation “into the condition of the fisheries” in the Taunton River (c. 22, Res. 1854).

<sup>63</sup> Lyman was a staff officer (LtCol) under General G.G. Meade during the Civil War, an overseer of Harvard University, both a state and federal fisheries commissioner, and a Republican representative to Congress (1883-85). He protected several hundred acres of sea run trout habitat in Barnstable and Plymouth counties, much of which is now included in the Trustees of Reservations “Lyman Reserve” and DFW’s “Red Brook Wildlife Management Area”. His father, Theodore Lyman II, was the philanthropist and mayor of Boston for whom the former Lyman School for Boys (1886-1971) was named. DFW’s Field Headquarters was successively in two of the former Lyman School dormitories between 1956 and 2012.

<sup>64</sup> T. Lyman and A.A. Reed. 1865. Report of the Commissioners concerning the obstructions to the passage of fish in the Connecticut and Merrimack Rivers. Senate Document 8, Boston, 59pp. The references are from page 40.

<sup>65</sup> “An Act concerning obstructions to the passage of fish in the Connecticut and Merrimack Rivers”, c. 238, St. 1866.

<sup>66</sup> The same year in which the German scientist Ernst Haeckel (1834-1919) coined the term “*oekologie*” to describe the study of the relationships between an organism and its environment.

### Obstructions to the Passage of Fish: 1866-1869.

<sup>1</sup> From this point on, any references to or data pertaining to marine fisheries will be minimal.

<sup>2</sup> Accessed from [www.massachusettscivilwar.com/statistics.asp](http://www.massachusettscivilwar.com/statistics.asp) on 20 December 2012.

<sup>3</sup> Wells, W. 1930. Political and governmental readjustments (1865-1889). Pages 588-620 in A.N. Hart (ed.) Commonwealth History of Massachusetts. Vol. 4. The States History Company, New York, 626pp.

<sup>4</sup> Tager, J. and R.W. Wilkie. 1991. Industrialization and urbanization, 1860-1900. Pages 34-37 in R.W. Wilkie and J. Tager (eds.) Historical Atlas of Massachusetts. University of Massachusetts Press, Amherst, Mass., 152pp.

<sup>5</sup> [First] Report of the Commissioners of Fisheries, for the year ending January 1, 1867. Commonwealth of Massachusetts, House Document 3, [Wright & Potter? Boston] submitted November 30, 1866, [9]pp. [in transcription]

<sup>6</sup> “An Act concerning obstructions to the passage of fish in the Connecticut and Merrimack Rivers”, c. 238, St. 1866.

<sup>7</sup> [Second] Report of the Commissioners of Fisheries, for the year ending January 1, 1868. Wright & Potter, State Printers, Boston, 50pp. The quotation is from page 7.

<sup>8</sup> Hardin, G. 1968. The tragedy of the commons. Science 162:1243-1248.

<sup>9</sup> [Third] Report of the Commissioners of Fisheries, for the year ending January 1, 1869. Wright & Potter, State Printers, Boston, 71pp. The quotation is from page 25.

<sup>10</sup> Fifth Annual Report of the Commissioners on Inland Fisheries. January 1871. Wright & Potter, State Printers, Boston, 77pp. The reference is from page 12.

<sup>11</sup> “An Act for encouraging the cultivation of useful fishes”, c. 384, St. 1869.

<sup>12</sup> [Fourth] Report of the Commissioners of Fisheries, for the year ending January 1, 1870. Wright & Potter, State Printers, Boston, 67pp.

<sup>13</sup> Brackett (b. Vassalboro, ME; d. Winchester, MA) served on the Commission (in its various configurations) longer than anyone else, from 1869-1907.

“Successful Cultivation of Fish is No Longer a Matter of Doubt”: 1870-1879.

- <sup>1</sup> Massachusetts was the first state to take action in fish culture (c. 58, Resolves of 1856), acting upon experiments by the French and others.
- <sup>2</sup> Seventh Annual Report of the Commissioners on Inland Fisheries, for the year ending January 1, 1873. Wright & Potter, State Printers, Boston, 31pp. The quotation is from page 19.
- <sup>3</sup> Grun, B. 1982. *The Timetables of History*. Touchstone Books, Simon & Schuster, New York, 676pp.
- <sup>4</sup> Thompson, P.E. 1970. The first fifty years—The exciting ones. Pages 1-11 in N.G. Benson (ed.) *A Century of Fisheries in North America*. American Fisheries Society, Washington, D.C., Special Publication No. 7, 330pp.
- <sup>5</sup> Theodore Lyman was President of the organization in 1884-85. The process to implement the name change was thus begun under his leadership.
- <sup>6</sup> Burroughs, J. [1871] 1887. *Wake-Robin*. Houghton-Mifflin Co., Boston, 256pp. The quotation is from page v.
- <sup>7</sup> Anderson, G.S. 1895. Protection of the Yellowstone National Park. Pages 327-402 in T. Roosevelt and G.B. Grinnell (eds.) *Hunting in Many Lands*. Forest and Stream Publishing Co., New York, 447pp. See also pages 403-423.
- <sup>8</sup> “An Act to set apart a certain Tract of Land lying near the Headwaters of the Yellowstone River as a public park”, approved March 1, 1872, and,  
“An Act to protect the birds and animals in Yellowstone National Park, and to punish crimes in said Park, and for other purposes”, approved May 7, 1894.
- <sup>9</sup> Trefethen, J.B. 1975. *An American Crusade for Wildlife*. Winchester Press and Boone and Crockett Club, New York, 409pp. and, [http://en.wikipedia.org/wiki/Forest\\_and\\_Stream](http://en.wikipedia.org/wiki/Forest_and_Stream) accessed on 1 January 2013.
- <sup>10</sup> Batchelder, C.F. 1937. *An Account of the Nuttall Ornithological Club, 1873-1919*. Nuttall Ornithological Club, Memoirs No. 8, 109pp.
- <sup>11</sup> Progulske, D.R. 1974. *Yellow Ore, Yellow Hair, Yellow Pine*. A photographic study of a century of forest ecology. South Dakota Agricultural Experiment Station, South Dakota State University, Brookings, S.D., Bulletin 616, 169pp.
- <sup>12</sup> “An Act to incorporate the Massachusetts Anglers’ Association”, c. 66, Acts of 1874.
- <sup>13</sup> Fifth Annual Report of the Commissioners on Inland Fisheries. January 1871. Wright & Potter, State Printers, Boston, 77pp. The reference is from page 12.
- <sup>14</sup> *Commissioners on Inland Fisheries v. Holyoke Water Power Co.*, 104 Mass. 451 (1870).
- <sup>15</sup> “An Act to aid in the preservation of birds, birds’ eggs, and deer”, c. 304, St. 1870.
- <sup>16</sup> Sixth Annual Report of the Commissioners on Inland Fisheries, for the year ending January 1, 1872. Wright & Potter, State Printers, 270pp. Note that the compilation “A collection of the laws relating to inland fisheries in Massachusetts, 1623-1886” is attached to this report (and was also published as a separate).



- <sup>17</sup> “An Act to prohibit the taking of black bass in Lake Cochituate”, c. 382, St. 1870.
- <sup>18</sup> Seventh Annual Report of the Commissioners on Inland Fisheries, for the year ending January 1, 1873. Wright & Potter, State Printers, Boston, 35pp.
- <sup>19</sup> Stolte, L. 1981. The Forgotten Salmon of the Merrimack. U.S. Department of the Interior, Northeast Region, 214pp.
- <sup>20</sup> Eighth Annual Report of the Commissioners on Inland Fisheries, for the year ending January 1, 1874. Wright & Potter, State Printers, Boston, 63pp.
- <sup>21</sup> *Holyoke Company v. Lyman*, 82 U.S. 500 (1872).
- <sup>22</sup> “An Act in relation to the smelt fishery”, c. 211, St. 1873.
- <sup>23</sup> Ninth Annual Report of the Commissioners on Inland Fisheries, for the year ending January 1, 1875. Wright & Potter, State Printers, Boston, 57pp.
- <sup>24</sup> “An Act for the protection of trout, land-locked salmon, and lake-trout”. c. 186, St. 1874.
- <sup>25</sup> Tenth Annual Report of the Commissioners on Inland Fisheries, for the year ending January 1, 1876. Wright & Potter, State Printers, Boston, 72pp. The quotation is from page 69.
- <sup>26</sup> Eleventh Annual Report of the Commissioners on Inland Fisheries, for the year ending January 1, 1877. Albert J. Wright, State Printer, Boston, 50pp.
- <sup>27</sup> Twelfth Annual Report of the Commissioners on Inland Fisheries, for the year ending January 1, 1878. Rand, Avery & Co., Printers to the Commonwealth, Boston, 68pp.
- <sup>28</sup> A conservative estimate is 350 fish. See: Stolte 1981:51 and 177-182.
- <sup>29</sup> “An Act for the preservation and protection of birds, birds’ eggs, deer and game”, c. 95, St. 1877.
- <sup>30</sup> Thirteenth Annual Report of the Commissioners on Inland Fisheries, for the year ending September 30, 1878. Rand, Avery & Co., Printers to the Commonwealth, 1879, 63pp. This is a shortened (9-month) report due to a change in the state’s fiscal year.
- <sup>31</sup> “An Act to suppress pigeon shooting and similar sports”, c. 187, St. 1879.
- <sup>32</sup> Fourteenth Annual Report of the Commissioners on Inland Fisheries, for the year ending September 30, 1879. Rand, Avery & Co., Printers to the Commonwealth, 1880, 50pp.
- <sup>33</sup> Fifteenth Annual Report of the Commissioners on Inland Fisheries, for the year ending September 30, 1880. Rand, Avery & Co., Printers to the Commonwealth, Boston, 1881, 77pp.
- <sup>34</sup> “An Act requiring certain returns to the Commissioners on Inland Fisheries”, c. 104, St. 1876.

"The Protection and Preservation of Birds and Mammals in Like Manner as to Fish":  
1880-1889.

- <sup>1</sup> Grun, B. 1982. *The Timetables of History*. Touchstone Books, Simon & Schuster, New York, 676pp.
- <sup>2</sup> Hart, A.B. (ed.) 1930. *Commonwealth History of Massachusetts*. Vol. 4. States History Company, New York, 626pp. See pages 186-189, 612-613, 617-618.
- <sup>3</sup> Williams, M. 1989. *Americans and Their Forests. A Historical Overview*. Cambridge University Press, Cambridge, U.K., 599pp. The reference is from page 361.
- <sup>4</sup> O'Keefe, J.F. and D.R. Foster. 1998. An ecological history of Massachusetts forests. Pages 19-66 *in* C.H.W. Foster (ed.) *Stepping Back to Look Forward. A History of the Massachusetts Forest*. Harvard University for the Harvard Forest, Petersham, Mass., 339pp.
- <sup>5</sup> Trefethen, J.B. 1975. *An American Crusade for Wildlife*. Winchester Press and Boone and Crockett Club, New York, 409pp.
- <sup>6</sup> Dunlap, T.R. 1988. *Saving America's Wildlife*. Princeton University Press, Princeton, N.J., 222pp.
- <sup>7</sup> Palmer, T.S. 1933. A brief history of the American Ornithologists' Union. Pages 7-27 *in* *Fifty Years Progress of American Ornithology, 1883-1933*. American Ornithologists' Union, Lancaster, Pa., 249pp.
- <sup>8</sup> Sargent, C.S. 1884. *Report on the Forests of North America (exclusive of Mexico)*. U.S. Department of the Interior, Census Office, Government Printing Office, Washington, D.C., 612pp. The quotations are from page 490.
- <sup>9</sup> Grinnell, G.B. 1913. Brief history of the Boone and Crockett Club. Pages 435-491 *in* G.B. Grinnell (ed.) *Hunting at High Altitudes*. Harper & Brothers, New York, 511pp.
- <sup>10</sup> Cardoza, J.E. 1976. The history and status of the black bear in Massachusetts and adjacent New England states. Division of Fisheries & Wildlife, Westborough, Mass., Research Bulletin 18, 113pp.
- <sup>11</sup> Kilpatrick, C.W., N. Merrill, P. Hapeman, J. Petty, and D.H. Hirth. 2003. Genetic structure of Vermont black bear populations. Paper presented at 10th Annual Conference of The Wildlife Society, Burlington, Vermont, Program Abstracts, page 163.
- <sup>12</sup> Allen, J.A. 1869. Catalogue of the mammals of Massachusetts; with a critical review of the species (Cetacea). *Bulletin of the Museum of Comparative Zoology* 1(8):143-252. The quotation is from page 194.
- <sup>13</sup> Anonymous. 1879. Game bag and gun. *Forest & Stream* 13:773. "The annual October hunt of the Spencer Sportsmen's Club took 1 'coon, 2 rabbits, 19 gray squirrel, [and] 9 red squirrel".
- <sup>14</sup> Atwood, H.D. 1909. A hunt in the Hockomock. *Forest & Stream* 73:577-578. [Snowshoe hare, 30 years prior]

- <sup>15</sup> Sixteenth Annual Report of the Commissioners on Inland Fisheries, for the year ending September 30, 1881. Rand, Avery & Co., Printers to the Commonwealth, Boston, 62pp.
- <sup>16</sup> The total salmon passed was estimated at 650. See: Stolte, L. 1981. The Forgotten Salmon of the Merrimack. U.S. Department of the Interior, Northeast Region, 214pp. The references are from pages 90-91.
- <sup>17</sup> Seventeenth Annual Report of the Commissioners on Inland Fisheries, for the year ending December 31, 1882. Wright & Potter Printing Co., State Printers, 58pp. See page 9. "Lake Superior salmon trout" are lake trout.
- <sup>18</sup> Estimated at 170 salmon actually passing. Stolte 1981:92.
- <sup>19</sup> Eighteenth Annual Report of the Commissioners on Inland Fisheries, for the year ending December 31, 1883. Wright & Potter, State Printers, Boston, 118pp.
- <sup>20</sup> Estimated at 54 salmon actually passing. Many were large fish >40 inches in length. Stolte 1981:92-93.
- <sup>21</sup> See c. 72, Resolves (special session) of 1881. Fisheries comprises Chapter 91 (and Game comprises Chapter 92). See also: Secretary of the Commonwealth. 1887. A collection of the laws relating to inland fisheries in Massachusetts, 1623-1886. Wright & Potter Printing Co., Boston, pages 361-377.
- <sup>22</sup> Nineteenth Annual Report of the Commissioners on Inland Fisheries, for the year ending December 31, 1884. Wright & Potter Printing Co., State Printers, Boston, 107pp.
- <sup>23</sup> Estimated at 350 salmon actually passing. Again, many were large fish >15 pounds. Stolte 1981:93-94.
- <sup>24</sup> Twentieth Annual Report of the Commissioners on Inland Fisheries, for the year ending December 31, 1885. Wright & Potter Printing Co., State Printers, Boston, 83pp.
- <sup>25</sup> Stolte 1981:94.
- <sup>26</sup> Smiley, C.W. 1885. Carp and carp ponds. Pages 40-48 in Twentieth Annual Report of the Commissioners on Inland Fisheries, for the year ending December 31, 1885. Wright & Potter Printing Co., State Printers, Boston, 83pp.
- <sup>27</sup> [Twenty-first Annual] Report of the Commissioners on Inland Fisheries and Game, for the year ending December 31, 1886. Wright & Potter Printing Co., State Printers, Boston, 91pp.
- <sup>28</sup> "An Act for the Better Preservation of Birds and Game", c. 276, St. 1886.
- <sup>29</sup> [Twenty-second Annual] Report of the Commissioners on Inland Fisheries and Game for the year ending December 31, 1887. Wright & Potter Printing Co., State Printers, Boston, 69pp.
- <sup>30</sup> Stolte 1981:102 gives "87" (nearly 1500 estimated). Typographical error?
- <sup>31</sup> Barrows, W.B. 1889. The English sparrow (*Passer domesticus*) in North America, especially in its relations to agriculture. U.S. Department of Agriculture, Division of Economic Ornithology and Mammalogy, Bulletin 1, 405pp.

<sup>32</sup> [Twenty-second Annual] Report of the Commissioners on Inland Fisheries and Game for 1887. The quotations are from pages 29, 31, and 32.

<sup>33</sup> [Twenty-third Annual] Report of the Commissioners on Inland Fisheries and Game for the year ending December 31, 1888. Wright & Potter Printing Co., State Printers, Boston, 81pp.

<sup>34</sup> Once again Stolte's (1981:102) figures (30 taken, ~2000 estimated) do not tally with those in the Commissioners' report.

<sup>35</sup> [Twenty-third Annual] Report of the Commissioners on Inland Fisheries and Game for 1888. The quotations are from pages 21 and 35.

<sup>36</sup> [Twenty-fourth Annual] Report of the Commissioners on Inland Fisheries and Game for the year ending December 31, 1889. Wright & Potter Printing Co., State Printers, Boston, 89pp.

<sup>37</sup> Estimated at "a little over" 1100 salmon actually passing. Stolte 1981:103.

### Mongolian Pheasants and Wilkinsonville Trout: the 1890s.

<sup>1</sup> Grun, B. 1982. *The Timetables of History*. Touchstone Books, Simon & Schuster, New York, 676pp.

<sup>2</sup> Tager, J. and R.W. Wilkie. 1991. Industrialization and urbanization, 1860-1900. Pages 34-37 in R.W. Wilkie and J. Tager (eds.) *Historical Atlas of Massachusetts*. University of Massachusetts Press, Amherst, Mass., 152pp.

<sup>3</sup> Abbot, W.J. 1930. Press and publications (1889-1929). Pages 479-503 in A.N. Hart (ed.) *Commonwealth History of Massachusetts*. Vol. 5. The States History Company, New York, 808pp.

<sup>4</sup> Foster, D., G. Motzkin, J. O'Keefe, E. Boose, D. Orwig, J. Fuller, and B. Hall. 2004. The environmental and human history of New England. Pages 43-100 in D. Foster and J.D. Aber. 2004. *Forests in Time. The Environmental Consequences of 1,000 years of Change in New England*. Yale University Press, New Haven, Conn., 477pp.

<sup>5</sup> Accessed from [www.thetrustees.org](http://www.thetrustees.org) on 10 January 2013.

<sup>6</sup> "An Act to incorporate the Trustees of Public Reservations", c. 352, St. 1891.

<sup>7</sup> Trefethen, J.B. 1975. *An American Crusade for Wildlife*. Winchester Press and Boone and Crockett Club, New York, 409pp.

<sup>8</sup> Dunlap, T.R. 1988. *Saving America's Wildlife*. Princeton University Press, Princeton, N.J., 222pp.

<sup>9</sup> Grant, M. 1897. The origin of the New York Zoological Society. Pages 313-320 in G.B. Grinnell and T. Roosevelt (eds.) *Trail and Campfire. The Book of the Boone and Crockett Club*. Forest and Stream Publishing Co., New York, 353pp.

<sup>10</sup> Leahy, C., J.H. Mitchell, and T. Conuel. 1996. *The Nature of Massachusetts*. Addison-Wesley Publishing Co., Reading, Mass., 226pp.

<sup>11</sup> *Geer v. Connecticut*, 161 U.S. 519 (1896). But also see the later *Hughes v. Oklahoma*, 441 U.S. 322 (1979). See Lund (1980) and Bean et al. (1997).

<sup>12</sup> Samuels, E.A. 1897. Game and fish in Massachusetts. Pages 351-370 in *With Rod and Gun in New England and the Maritime Provinces*. Samuels & Kimball, Boston, 540pp.

<sup>13</sup> Thayer, C.N. [1896] 1976. Trout fishing in Falmouth. Pages 12-13 in *Falmouth-by-the-Sea. The Naples of America*. Falmouth Chamber of Commerce, Falmouth, Mass., 193pp.

<sup>14</sup> Cleveland, G. 1906. *Fishing and Shooting Sketches*. The Outing Publishing Co., New York, 209pp.

<sup>15</sup> Bates, F.A. 1899. *Stories of Lake, Field, and Forest. Rambles of a Sportsman-naturalist*. Bates Scientific and Historical Books, South Braintree, Mass., 165pp.

<sup>16</sup> Anonymous. 1890. Worcester fox hunting. *Forest and Stream* 35:376.

<sup>17</sup> Burnham, J.R. 1895. The western Massachusetts fox club hunt. *Forest and Stream* 45:447-448.

<sup>18</sup> Stanton, M.G. (ed.) 1994. *Nantucket Argument Settlers. Island history at a glance, 1602-1993* (9th ed.) The Inquirer and Mirror, Nantucket, Mass., 318pp.

<sup>19</sup> Forbush, E.H. 1912. *A History of the Game-birds, Wild-fowl, and Shore Birds of Massachusetts and Adjacent States*. Massachusetts State Board of Agriculture, Boston, 622pp.

<sup>20</sup> Hapgood, W. 1897. Brant and brant shooting at Chatham, Mass. Pages 246-251 in Samuels, E.A. 1897. *With Rod and Gun in New England and the Maritime Provinces*. Samuels & Kimball, Boston, 540pp.

<sup>21</sup> Phillips, J.C. 1936. *Wenham Lake Shooting Record and the "Farm Bag", 1897-1925*. Cosmos Press, Cambridge, Mass., 171pp.

<sup>22</sup> Phillips, J.C. 1929. *The Shooting Journal of George Henry Mackay, 1865-1922*. Cosmos Press, Cambridge, Mass., 373pp.

<sup>23</sup> Bates 1899:35-44.

<sup>24</sup> Samuels 1897:107.

<sup>25</sup> Nye, R.S. 1895. *Scientific Duck Shooting in Eastern Waters*. Independent Press, Spencer & West, Falmouth, Mass., 116pp.

<sup>26</sup> Cleveland, G. 1906. The serene duck hunter. Pages 47-75 in *Fishing and Shooting Sketches*. The Outing Publishing Co., New York, 209pp. The quotation is from page 75.

<sup>27</sup> [Twenty-fifth Annual] Report of the Commissioners on Inland Fisheries and Game for the year ending December 31, 1890. Wright & Potter Printing Co., State Printers, Boston, 93pp. The quotation is from page 21.

<sup>28</sup> Stolte, L. 1981. *The Forgotten Salmon of the Merrimack*. U.S. Department of the Interior, Northeast Region, 214pp. The reference is from page 105.



- <sup>29</sup> “An Act providing for the better maintenance and enforcement of the fish and game laws and the distribution of fish”, c. 390, St. 1890.
- <sup>30</sup> “An Act to limit the time within which trout, landlocked salmon, and lake trout may be taken in Berkshire, Franklin, Hampshire, and Hampden counties”, c. 193, St. 1890.
- <sup>31</sup> [Twenty-sixth Annual] Report of the Commissioners on Inland Fisheries and Game for the year ending December 31, 1891. Wright & Potter Printing Co., State Printers, Boston, 120pp. The quotations are from page 19.
- <sup>32</sup> Estimated at >1600 salmon actually passing. Stolte 1981:106.
- <sup>33</sup> “Resolutions relating to the adoption of uniform laws for the protection of food fishes in the New England states”, Senate No. 265, adopted May 18, 1891, House in concurrence June 1, 1891.
- <sup>34</sup> “An Act fixing the penalty for the taking or killing of woodcock, grouse, quail and duck within certain periods”, c. 142, St. 1891.
- <sup>35</sup> “An Act relating to evidence in cases of violation of certain game laws”. c. 254, St. 1891.
- <sup>36</sup> [Twenty-seventh Annual] Report of the Commissioners on Inland Fisheries and Game for the year ending December 31, 1892. Wright & Potter Printing Co., State Printers, Boston, 74pp.
- <sup>37</sup> Estimated at >3000 salmon actually passing. Stolte 1981:113.
- <sup>38</sup> [Twenty-eighth Annual] Report of the Commissioners on Inland Fisheries and Game for the year ending December 31, 1893. Wright & Potter Printing Co., State Printers, Boston, 77pp.
- <sup>39</sup> Estimated at >3600 salmon actually passing. Stolte 1981:114-115.
- <sup>40</sup> “An Act to authorize officers qualified to serve criminal processes, and the Commissioners on inland fisheries and game and their deputies, to make arrests without warrant for violation of fish and game laws”, c. 105, St. 1893.
- <sup>41</sup> [Twenty-ninth Annual] Report of the Commissioners on Inland Fisheries and Game for the year ending December 31, 1894. Wright & Potter Printing Co., State Printers, Boston, 91pp. The quotation is from page 16.
- <sup>42</sup> Estimated at >900 salmon actually passing. Stolte 1981:115-116.
- <sup>43</sup> “An Act prohibiting the taking or killing of gray squirrels, hares or rabbits between the first day of March and the fifteenth day of September”, c. 97, St. 1894.
- <sup>44</sup> “An Act for the protection of quail during the year eighteen hundred and ninety-four”, c. 102, St. 1894.
- <sup>45</sup> “An Act concerning the preservation of birds and game”, c. 205, St. 1894.
- <sup>46</sup> Attempts to establish English pheasants on Great Island on Cape Cod in the 1880s were a failure. See: Phillips, J.C. 1928. Wild birds introduced or transplanted in North America. U.S. Department of Agriculture Technical Bulletin 61, 64pp.

- <sup>47</sup> [Thirtieth Annual] Report of the Commissioners on Inland Fisheries and Game for the year ending December 31, 1895. Wright & Potter Printing Co., State Printers, Boston, 97pp.
- <sup>48</sup> Estimated at >1700 salmon actually passing. Stolte 1981:116.
- <sup>49</sup> “An Act to remove the restrictions upon shad and alewife fishing in the Merrimac River”, c. 88, St. 1895.
- <sup>50</sup> “Resolve relative to the fish hatching station at Plymouth, in the State of New Hampshire, now used and managed by said State and this Commonwealth in Common”, c. 127, Resolves of 1895.
- <sup>51</sup> “Resolve providing for the introduction of Mongolian pheasants into the Commonwealth”, c. 79, Resolves of 1894, and “Resolve providing for the purchase and propagation of Mongolian pheasants”, c. 12, Resolves of 1895.
- <sup>52</sup> Massachusetts was one of the first eastern states to successfully propagate and establish ring-necked pheasants. See: Studholme, A.T. and D. Benson. 1956. The pheasant in the northeastern states. Pages 388-430 in D.L. Allen (ed.) Pheasants in North America. Stackpole Co., Harrisburg, Pa. and Wildlife Management Institute, Washington, D.C., 490pp.
- <sup>53</sup> [Thirty-first Annual] Report of the Commissioners on Inland Fisheries and Game for the year ending December 31, 1896. Wright & Potter Printing Co., State Printers, Boston, 69pp. The quotation is from page 18.
- <sup>54</sup> Stolte 1981:120.
- <sup>55</sup> “Resolve to provide for the establishment of a fish hatchery in the western part of the Commonwealth”, c. 114, Resolves of 1896.
- <sup>56</sup> “An Act relative to black bass fishing”, c. 229, St. 1896.
- <sup>57</sup> [Thirty-second Annual] Report of the Commissioners on Inland Fisheries and Game for the year ending December 31, 1897. Wright & Potter Printing Co., State Printers, Boston, 91pp.
- <sup>58</sup> “Resolve to provide for repairing the fishway over the Lawrence Dam”, c. 53, Resolves of 1897.
- <sup>59</sup> Stolte 1981:120.
- <sup>60</sup> “Resolve to provide for rebuilding the state fish hatchery in the Town of Winchester”, c. 74, Resolves of 1897.
- <sup>61</sup> “An Act to provide for the stocking of the great ponds of the state with food fish”, c. 208, St. 1897.
- <sup>62</sup> “An Act relative to the protection of certain birds”, c. 524, St. 1897.
- <sup>63</sup> [Thirty-third Annual] Report of the Commissioners on Inland Fisheries and Game for the year ending December 31, 1898. Wright & Potter Printing Co., State Printers, Boston, 81pp. The quotation is from page 15.
- <sup>64</sup> “Resolve to provide for the establishment of a fish hatchery in the County of Berkshire”, c. 60, Resolves of 1898.

<sup>65</sup> Stolte 1981:120 and 128.

<sup>66</sup> “An Act to more effectually prevent the unlawful use of ferrets for hunting purposes”, c. 124, St. 1898.

<sup>67</sup> “An Act relative to the preservation of deer”, c. 181, St. 1898.

<sup>68</sup> “An Act relative to the protection of certain birds”, c. 339, St. 1898. See also Trefethen (1975) and Dunlap (1988).

<sup>69</sup> “An Act relative to fines and forfeitures under the laws for the protection of fish and game”, c. 205, St. 1898.

<sup>70</sup> [Thirty-fourth Annual] Report of the Commissioners on Inland Fisheries and Game for the year ending December 31, 1899. Wright & Potter Printing Co., State Printers, Boston, 93pp.

<sup>71</sup> “An Act to provide for the cultivation of food fish”, c. 107, St. 1899.

<sup>72</sup> “An Act to make the Lord’s Day close season for birds and game”, c. 116, St. 1899. See (among other references) c. 253, St. 1865, and the Tercentenary Edition of the Massachusetts General Laws (1932), c. 136, § 17.

<sup>73</sup> “An Act relative to fines and forfeitures under the laws protecting fish and game”, c. 360, St. 1899.

“Artificial Propagation and Protection of Native Varieties is More Essential  
than Introduction of New Varieties”: The 1900s.

<sup>1</sup> Grun, B. 1982. The Timetables of History. Touchstone Books, Simon & Schuster, New York, 676pp.

<sup>2</sup> Department of Commerce. 1975. Historical Statistics of the United States. Colonial Times to 1970. Part I. U.S. Department of Commerce, Bureau of the Census, Washington, D.C., 609pp.

<sup>3</sup> Tager, J. and R.W. Wilkie. 1991. Industrialization and urbanization, 1860-1900. Pages 34-37 in R.W. Wilkie and J. Tager (eds.) Historical Atlas of Massachusetts. University of Massachusetts Press, Amherst, Mass., 152pp.

<sup>4</sup> Tager, J., R.W. Wilkie and L.W. Owens. 1991. Metropolitan Commonwealth, 1900-1950. Pages 38-45 in R.W. Wilkie and J. Tager (eds.) Historical Atlas of Massachusetts. University of Massachusetts Press, Amherst, Mass., 152pp.

<sup>5</sup> Hart, A.B. (ed.) 1930. Commonwealth History of Massachusetts. Vol. 5. The States History Company, New York, 808pp.

<sup>6</sup> Foster, D., G. Motzkin, J. O’Keefe, E. Boose, D. Orwig, J. Fuller, and B. Hall. 2004. The environmental and human history of New England. Pages 43-100 in D. Foster and J.D. Aber. 2004. Forests in Time. The Environmental Consequences of 1,000 years of Change in New England. Yale University Press, New Haven, Conn., 477pp.

<sup>7</sup> Rivers, W.H. 1998. Massachusetts state forestry programs. Pages 147-219 in C.H.W. Foster (ed.) Stepping Back to Look Forward. A History of the Massachusetts Forest. Harvard University for the Harvard Forest, Petersham, Mass., 339pp.

<sup>8</sup> “An Act to establish the office of the State Forester”, c. 409, St. 1904.

<sup>9</sup> The so-called “Province Lands” at the tip of Cape Cod, once part of the Massachusetts Bay Colony and in public ownership, were brought into the Colony of Massachusetts upon merger in 1687, and thence to the Commonwealth upon statehood.

<sup>10</sup> “An Act to establish the Greylock State Reservation in the County of Berkshire”, c. 543, St. 1898.

<sup>11</sup> Originally c. 553, 31 Stat. 187 (1900), now at 16 U.S.C. §§ 3371-3378 and 18 U.S.C. § 42. Amended several times to address other taxonomic groups, injurious animals, and noxious weeds. See: Bean, M.J. and M.J. Rowland. 1997. *The Evolution of National Wildlife Law* (3rd ed.) Praeger Publishers, Westport, Conn., 544pp.

<sup>12</sup> Pinchot, G. 1947. *Breaking New Ground*. Harcourt, Brace and Co., New York, 522pp. The quotation is from page 150.

<sup>13</sup> Belanger, D.O. 1988. *Managing American Wildlife. A History of the International Association of Fish and Wildlife Agencies*. University of Massachusetts Press, Amherst, Mass., 247pp.

<sup>14</sup> See c. 561, 26 Stat. 1103 (1891)

<sup>15</sup> Trefethen 1975:122-124. Enacted in response to public outrage over the killing of herons, egrets and other birds for feathers for hat and dress decorations.

<sup>16</sup> Morris, E. 2001. *Theodore Rex*. Random House, New York, 772pp.

<sup>17</sup> See 33 Stat. 628 (1905), later codified at 16 U.S.C. 472, 524, 554.

<sup>18</sup> Trefethen, J.B. 1975. *An American Crusade for Wildlife*. Winchester Press and Boone and Crockett Club, New York, 409pp. The reference is from page 124.

<sup>19</sup> “An Act for the preservation of American antiquities”, 16 U.S.C. §§ 431-433.

<sup>20</sup> Dunlap, T.R. 1988. *Saving America’s Wildlife*. Princeton University Press, Princeton, N.J., 222pp. The reference is from page 14.

<sup>21</sup> Pearson, T.G. 1937. *Adventures in Bird Protection*. D. Appleton-Century Co., New York, 459pp. See pages 127-135.

<sup>22</sup> Shaler, N.S. 1905. *Man and the Earth*. Chautauqua Press, Chautauqua, N.Y., 240pp. The quotations are from pages 159 and 207.

<sup>23</sup> [Thirty-fifth Annual] Report of the Commissioners on Inland Fisheries and Game for the year ending December 31, 1900. Wright & Potter Printing Co., State Printers, 140pp. The quotation regarding Belgian hare is from page 42. The Commissioners’ source is probably: Palmer, T.S. 1899. The danger of introducing noxious animals and birds. Pages 87-110 in *Yearbook of the U.S. Department of Agriculture for 1898*. U.S. Government Printing Office, Washington, D.C., 768pp.

<sup>24</sup> Crowell, A.E. 1947. Cape Cod memories. Pages 56-60 in E.V. Connett (ed.) *Duck Shooting along the Atlantic Tidewater*. W. Morrow & Co., New York, 308pp.

<sup>25</sup> Allen, G.M. 1930. History of the Virginia deer in New England. *Proceedings of the New England Game Conference for 1929*:19-41.

- <sup>26</sup> Shaw, S.P. and C.L. McLaughlin. 1951. The management of white-tailed deer in Massachusetts. Massachusetts Division of Fisheries & Game, Research Bulletin 13, 59pp.
- <sup>27</sup> Forbush, E.H. 1912. A History of the Game-birds, Wild-fowl, and Shore Birds of Massachusetts and Adjacent States. Massachusetts State Board of Agriculture, Boston, 622pp.
- <sup>28</sup> Gill, R.E., Jr., P. Canevari, and E.H. Iversen. 1998. Eskimo curlew (*Numenius borealis*). In The Birds of North America, No. 347 (A. Poole and F. Gill, eds.). The Birds of North America, Inc., Philadelphia, Pa.
- <sup>29</sup> Vaughan, E.T. (ed.) 1977. New England's Prospect [by] William Wood. University of Massachusetts Press, Amherst, Mass., 132pp. A modern translation of the second (1635) edition. The direct quote is from page 28 of a facsimile of the 1634 edition.
- <sup>30</sup> Schorger, A.W. [1955] 1973. The Passenger Pigeon. Its Natural History and Extinction. University of Oklahoma Press, Norman, Okla., 424pp.
- <sup>31</sup> Cardoza, J.E. 1998. The European rabbit: history of introductions, and its status, biology, and environmental effects, with special reference to Massachusetts. Massachusetts Division of Fisheries & Wildlife, Westborough, Mass., 45pp.
- <sup>32</sup> This is apparently the first instance where the Massachusetts "fish and game" entity printed and distributed "Abstracts" of the pertinent laws. However, various commercial enterprises had done so in previous years.
- <sup>33</sup> "An Act to provide for the protection of Mongolian, English and golden pheasants", c. 64, St. 1900.
- <sup>34</sup> "An Act to provide for the better protection and to regulate the sale of game birds", c. 379, St. 1900.
- <sup>35</sup> "An Act to regulate fishing in brooks stocked by the Commissioners on Inland Fisheries and Game", c. 284, St. 1900.
- <sup>36</sup> [Thirty-sixth Annual] Report of the Commissioners on Inland Fisheries and Game for the year ending December 31, 1901. Wright & Potter Printing Co., State Printers, Boston, 192pp.
- <sup>37</sup> "An Act relative to the taking or killing of gray squirrels, hares and rabbits", c. 102, St. 1901.
- <sup>38</sup> "An Act to provide for the better protection of trout", c. 121, St. 1901.
- <sup>39</sup> "An Act to provide for the further protection of wild pigeons, gulls and terns", c. 178, St. 1901. The passenger pigeon was almost certainly extirpated from the state by this time.
- <sup>40</sup> [Thirty-seventh Annual] Report of the Commissioners on Fisheries and Game for the year ending December 31, 1902. Wright & Potter Printing Co., State Printers, Boston, 201pp.
- <sup>41</sup> "An Act to authorize the Board of Commissioners on Fisheries and Game to make certain investigations", c. 178, St. 1902.



<sup>42</sup> “An Act to provide for the better protection of game”, c. 236, St. 1902.

<sup>43</sup> [Thirty-eighth Annual] Report of the Commissioners on Fisheries and Game for the year ending December 31, 1903. Wright & Potter Printing Co., State Printers, Boston, 248pp. The reference and quotation are from pages 8 and 135.

<sup>44</sup> “An Act to provide for the better protection of marsh and beach birds”, c. 162, St. 1903.

<sup>45</sup> “An Act to provide for the protection of certain marsh birds”, c. 244, St. 1903.

<sup>46</sup> “An Act to prohibit the sale of all trout except those artificially reared”, c. 205, St. 1903.

<sup>47</sup> “An Act to provide for the better protection of deer”, c. 245, St. 1903.

<sup>48</sup> “An Act relative to recovery for damages caused by wild deer”, c. 407, St. 1903.

<sup>49</sup> “An Act to provide for the better protection of song and insectivorous birds”, c. 287, St. 1903.

<sup>50</sup> “An Act to provide for the payment of a bounty for killing a wild cat, Canada lynx, or loup-cervier”, c. 344, St. 1903.

<sup>51</sup> [Thirty-ninth Annual] Report of the Commissioners on Fisheries and Game for the year ending December 31, 1904. Wright & Potter Printing Co., State Printers, Boston, 213pp.

<sup>52</sup> Opinion of the Attorney General, 25 November 1904, concerning “Great Ponds-Sources of Water Supply-Rules and Regulations of State Board of Health-Commissioners of Fisheries and Game-Duty to Stock with Food Fish”.

<sup>53</sup> Ripley, T.H. 1954. New England bobwhite quail: history and investigations of present populations on Martha’s Vineyard and Cape Cod, Massachusetts. Thesis, University of Massachusetts, Amherst, 111pp.

<sup>54</sup> “An Act to provide further for the protection of pickerel”, c. 329, St. 1904.

<sup>55</sup> “An Act relative to the right of search by the Commissioners on Fisheries and Game and their deputies”, c. 367, St. 1904.

<sup>56</sup> “An Act to provide further for the protection of shore, marsh, and beach birds”, c. 369, St. 1904.

<sup>57</sup> [Fortieth Annual] Report of the Commissioners on Fisheries and Game for the year ending December 31, 1905. Wright & Potter Printing Co., State Printers, Boston, 258pp. The quotation is from page 2.

<sup>58</sup> Belding (subsequently an M.D.) was later recognized for his pioneering work on shellfish. Many of his personal records and papers are at the Massachusetts Archives, 220 Morrissey Blvd., Boston.

<sup>59</sup> “An Act relative to the taking and sale of small trout”, c. 190, St. 1905.

<sup>60</sup> “An Act relative to the protection of deer from dogs”, c. 245, St. 1905.

- <sup>61</sup> “An Act to provide for granting licenses to unnaturalized, foreign born persons licenses to hunt”, c. 317, St. 1905.
- <sup>62</sup> “An Act relative to shore, marsh and beach birds”, c. 414, St. 1905.
- <sup>63</sup> [Forty-first Annual] Report of the Commissioners on Fisheries and Game for the year ending December 31, 1906. Wright & Potter Printing Co., State Printers, Boston, 230pp.
- <sup>64</sup> “An Act to prevent the extermination of the heath hen, so-called”, c. 141, St. 1906.
- <sup>65</sup> “An Act relative to the transportation and sale of pike-perch”, c. 179, St. 1906.
- <sup>66</sup> “An Act relative to the protection of wood or summer duck”, c. 274, St. 1906.
- <sup>67</sup> “An Act relative to ducks and teal”, c. 301, St. 1906.
- <sup>68</sup> “An Act relative to quail”, c. 303, St. 1906.
- <sup>69</sup> “An Act to prohibit the sale of prairie chickens”, c. 304, St. 1906. This was to avoid similarity of appearance relative to the protected heath hen.
- <sup>70</sup> “An Act to provide for the protection of property and material used by the Commissioners on Fisheries and Game in making scientific investigations”, c. 327, St. 1906.
- <sup>71</sup> “An Act relative to the discharge of sawdust into streams”, c. 356, St. 1906.
- <sup>72</sup> [Forty-second Annual] Report of the Commissioners on Fisheries and Game for the year ending December 31, 1907. Wright & Potter Printing Co., State Printers, Boston, 135pp. The quotations are from pages 4 and 76.
- <sup>73</sup> Forbush, E.H. 1907. Useful Birds and Their Protection. Massachusetts State Board of Agriculture, Boston, 437pp.
- <sup>74</sup> “An Act relative to the protection of loons and eagles”, c. 118, St. 1907.
- <sup>75</sup> “An Act to provide for the better protection of gray squirrels”, c. 166, St. 1907.
- <sup>76</sup> “An Act to require non-resident hunters to procure licenses to hunt”, c. 198, St. 1907.
- <sup>77</sup> “An Act relative to certain birds of prey”, c. 250, St. 1907.
- <sup>78</sup> “An Act relative to the protection of deer”, c. 307, St. 1907.
- <sup>79</sup> “An Act to authorize the taking of certain unimproved land from the Island of Martha’s Vineyard for the protection of pinnated grouse and other birds”, c. 504, St. 1907.
- <sup>80</sup> [Forty-third Annual] Report of the Commissioners on Fisheries and Game for the year ending December 31, 1908. Wright & Potter Printing Co., State Printers, Boston, 143pp. The quotation is from page 56.
- <sup>81</sup> “An Act relative to the powers of the Commissioners on Fisheries and Game and their deputies”, c. 255, St. 1908.
- <sup>82</sup> “An Act to extend the authority of the Commissioners on Fisheries and Game and their deputies”, c. 417, St. 1908.

<sup>83</sup> “An Act further to provide for the protection of deer”, c. 377, St. 1908.

<sup>84</sup> “An Act relative to the purchase and sale of rabbits and hares lawfully killed”, c. 413, St. 1908.

<sup>85</sup> “An Act relative to ruffed grouse, woodcock, and quail”, c. 441, St. 1908.

<sup>86</sup> “An Act relative to Mongolian, Chinese, English, and golden pheasants”, c. 477, St. 1908.

<sup>87</sup> “An Act to provide for the registration of hunters”, c. 484, 1908.

<sup>88</sup> “An Act to authorize the State Board of Agriculture to appoint a state ornithologist”, c. 245, St. 1908. The first ornithologist was Edward Howe Forbush (1858-1929).

<sup>89</sup> [Forty-fourth Annual] Report of the Commissioners on Fisheries and Game for the year ending December 31, 1909. Wright & Potter Printing Co., State Printers, Boston, 140pp.

<sup>90</sup> “Resolve to provide for an investigation of the cost of propagating freshwater food and game fish and useful game birds and mammals”, c. 121, Resolves of 1909.

<sup>91</sup> “An Act to provide for the establishment of refuges for birds and game”, c. 362, St. 1909.

<sup>92</sup> “An Act relative to trout and salmon”, c. 377, St. 1909.

<sup>93</sup> “An Act to establish the open seasons for ruffed grouse, quail, and woodcock”, c. 272, St. 1909.

<sup>94</sup> “An Act to provide for the protection of wild fowl”, c. 421, St. 1909.

<sup>95</sup> “An Act relative to the protection and sale of hares and rabbits”, c. 466, St. 1909.

<sup>96</sup> “An Act relative to licenses to hunt”, c. 262, St. 1909.

#### “Conservation Has Captured the Nation...[It] is a Moral Issue”: the 1910s.

<sup>1</sup> Pinchot, G. [1910] 1967. *The Fight for Conservation*. University of Washington Press, Seattle, Wash., 152pp. The quotation is from pages 132-133. See Chapter 4 for Pinchot’s views on the meaning of “conservation”.

<sup>2</sup> Grun, B. 1982. *The Timetables of History*. Touchstone Books, Simon & Schuster, New York, 676pp.

<sup>3</sup> Barry, J.M. 2004. *The Great Influenza*. Viking, New York, 546pp.

<sup>4</sup> Hart, A.B. (ed.) 1930. *Commonwealth History of Massachusetts*. Vol. 5. The States History Company, New York, 808pp.

<sup>5</sup> Van Hise, C.R. 1910. *The Conservation of Natural Resources in the United States*. Macmillan Co., New York, 413pp. The quotations are from pages 363-364.

<sup>6</sup> Van Hise is referring to the concepts of Thomas Hobbes (1588-1679) whose masterwork *Leviathan* (1651) describes the natural state of man as “solitary, poor, nasty, brutish, and short” (First Part, Of Man, Chapter XII).

- <sup>7</sup> Trefethen, J.B. 1975. An American Crusade for Wildlife. Winchester Press and Boone and Crockett Club, New York, 409pp.
- <sup>8</sup> In 1946, the public activities of the American Wildlife Institute were assumed by the newly formed "Wildlife Management Institute" and the old American Wildlife Institute was transmuted into the "North American Wildlife Foundation". See Trefethen (1976):241.
- <sup>9</sup> Wildlife Restoration and Conservation. Proceedings of the North American Wildlife Conference <etc.> 1936. U.S. Government Printing Office, Washington, D.C., 675pp. The reference is from page xvi.
- <sup>10</sup> Hornaday, W.T. 1887. The Extirpation of the American Bison, with a sketch of its discovery and life history. Pages 369-548 in Report of the United States National Museum under the direction of the Smithsonian Institution, 1887. U.S. Government Printing Office, Washington, D.C., 771pp. Hornaday and Theodore Roosevelt co-founded the American Bison Society in 1905.
- <sup>11</sup> Hornaday, W.T. 1913. Our Vanishing Wild Life. Its Extirpation and Preservation. New York Zoological Society, New York, 411pp.
- <sup>12</sup> Migratory Bird Act of 1913, Act of March 4, 1913, c. 145, 37 Stat. 828, 847 (repealed 1918).
- <sup>13</sup> Hewitt, C.G. 1921. The Conservation of the Wild Life of Canada. Charles Scribner's Sons, New York, 344pp. See pages 264-274.
- <sup>14</sup> Convention for the Protection of Migratory Birds, Aug. 16, 1916, United States-Great Britain (on behalf of Canada), 39 Stat. 1702. T.S. No. 628. In later years, migratory bird treaties were ratified with Mexico (1936, amended in 1972), Japan (1972) and the Soviet Union (1976).
- <sup>15</sup> Act of July 3, 1918, c. 128, 40 Stat. 755 (1918). Current version at 16 U.S.C. §§ 703-712.
- <sup>16</sup> *Missouri v. Holland*, 252 U.S. 416 (1920)
- <sup>17</sup> Williams, M. 1989. Americans and Their Forests. A Historical Overview. Cambridge University Press, Cambridge, U.K., 599pp. The references are from pages 335-336.
- <sup>18</sup> Sherburne, J.H. 1930. Massachusetts in the World War (1914-1919). Pages 598-631 in Hart, A.B. (ed.) 1930. Commonwealth History of Massachusetts. Vol. 5. The States History Company, New York, 808pp. The reference is from page 628.
- <sup>19</sup> Schubert, F.N. 1978. All wooden on the western front. Journal of Forest History 22 (October 1978):180-181.
- <sup>20</sup> Rivers, W.H. 1998. Massachusetts state forestry programs. Pages 147-219 in C.H.W. Foster (ed.) Stepping Back to Look Forward. A History of the Massachusetts Forest. Harvard University for the Harvard Forest, Petersham, Mass., 339pp.
- <sup>21</sup> [Forty-fifth Annual] Report of the Commissioners on Fisheries and Game for the year ending December 31, 1910. Wright & Potter Printing Co., State Printers, Boston, 256pp.

<sup>22</sup> See: Oldys, H. 1911. The game market of today. Pages 243-254 in U.S. Department of Agriculture for 1910, U.S. Government Printing Office, Washington D.C., 711pp. "The principal game markets of today are Chicago, New York, Philadelphia, and Boston. Boston is first in the deer trade, principally from Maine". In New York, venison sold for 5 d./lb. in 1763 and 22-25¢/lb. in 1910; black or mallard ducks for 5 s. ea. in 1763 and \$1.25 ea. in 1910. For the culinary qualities of wild game, see: DeVoe, T.F. 1867. The Market Assistant. Containing a brief description of every article of human food sold in the public markets <etc.> Hurd & Houghton, New York, 455pp.

<sup>23</sup> This is the actual number killed, from the table on pages 183-187. The "total" of 1413 on pages 14 and 188 includes the number reported as "wounded". However, the total "killed on record" and the number "wounded on record" (page 188) reflect only the actual number killed, by tallying pages 183-187.

<sup>24</sup> "An Act to establish the open season for ruffed grouse, quail, and woodcock", c. 365, St. 1910.

<sup>25</sup> "An Act to provide for protecting upland plover, wild pigeons, gulls and terns", c. 472, St. 1910. By the time this statute had sunset in 1915, the "wild pigeons" were extinct.

<sup>26</sup> "An Act relative to the protection of game birds, waterfowl, hares and rabbits", c. 533, St. 1910.

<sup>27</sup> "An Act relative to the taking or killing of deer", c. 545, St. 1910. Allowed for a 6-day season in late November, reporting required, one deer either sex, shotgun only.

<sup>28</sup> "An Act to increase the number of deputies of the Board of Commissioners on Fisheries and Game", c. 575, St. 1910.

<sup>29</sup> "Resolve to provide for an investigation and report as to the adaptability of the public waters to the rearing of food fish", c. 140, Resolves of 1910.

<sup>30</sup> [Forty-sixth Annual] Report of the Commissioners on Fisheries and Game for the year ending December 31, 1911. Wright & Potter Printing Co., State Printers, Boston, 139pp.

<sup>31</sup> These initial reports were the start of the existing dynamic "pond files" of the Division of Fisheries and Wildlife.

<sup>32</sup> Tallies as given on pages 66-71 of the 1911 report. Note that the total on page 66 differs from that on page 71 by two deer (no town given?). All reported deer harvest tallies should be carefully scrutinized to ascertain the correct total. Annual figures will not be given in [most] further summaries in this book. See: Shaw, S.P. and C.L. McLaughlin. 1951. The management of white-tailed deer in Massachusetts. Massachusetts Division of Fisheries & Game, Research Bulletin 13, 59pp. for harvest tabulations 1910-1950.

<sup>33</sup> "An Act to prevent the extermination of the heath hen, so-called", c. 18, St. 1911.

<sup>34</sup> "An Act relative to the protection of the wood or summer duck", c. 39, St. 1911.

<sup>35</sup> "An Act relative to the introduction of fish into state waters", c. 185, St. 1911.

<sup>36</sup> "An Act relative to the shooting of certain wild fowl", c. 187, St. 1911.



<sup>37</sup> “An Act to limit the number of black ducks that may be taken in one day”, c. 188, St. 1911. Bag limit was set at 15 ducks.

<sup>38</sup> “An Act to provide for the establishment of state bird and game preserves and the protection and propagation of wild birds and quadrupeds”, c. 410, St. 1911.

<sup>39</sup> “An Act relative to hunters’ certificate of registration”, c. 235, St. 1911. The licensee must prove residency and carry certificate on person; a person under the age of 16 must have written authorization from parent.

<sup>40</sup> “An Act relative to the protection and importation of wild turkeys”, c. 343, St. 1911.

<sup>41</sup> “Resolve to provide for the establishment of a fish hatchery”, c. 68, Resolves of 1911.

<sup>42</sup> [Forty-seventh through Forty-ninth Annual] Reports of the Commissioners on Fisheries and Game for the years 1912, 1913 and 1914. Wright & Potter Printing Co., State Printers, Boston, 94pp.

<sup>43</sup> “Resolve to authorize the sale of certain property of the Commonwealth now in the custody of the Board of Commissioners on Fisheries and Game”, c. 49, Resolves of 1912.

<sup>44</sup> “An Act to authorize the Board of Commissioners on Fisheries and Game to take lands in the County of Barnstable for establishing fish hatcheries”, c. 237, St. 1912.

<sup>45</sup> “An Act to authorize the Board of Commissioners on Fisheries and Game to take additional land in the County of Barnstable for establishing fish hatcheries”, c. 690, St. 1912.

<sup>46</sup> “Resolve to provide for the establishment of fish hatcheries and the propagation of food and game fish”, c. 6, Resolves of 1912.

<sup>47</sup> “An Act to authorize the Board of Commissioners on Fisheries and Game to take lands in the County of Worcester for establishing fish hatcheries and bird farms”, c. 682, St. 1912.

<sup>48</sup> An Act relative to the killing of pheasants”, c. 401, St. 1914.

<sup>49</sup> “An Act relative to the shooting of deer in the counties of Bristol, Essex and Middlesex”, c. 388, St. 1912.

<sup>50</sup> “An Act relative to the taking or killing of deer”, c. 529, St. 1913.

<sup>51</sup> “An act to prohibit the hunting of birds or quadrupeds with rifles, revolvers or pistols during the open season on deer”, c. 542, St. 1913.

<sup>52</sup> “An Act to prohibit the poisoning and snaring of wild animals and to regulate the use of traps”, c. 626, St. 1913. This law prohibited leghold traps with a jaw spread >6 inches, required trappers to visit traps at least once every 24 hours, and prohibited trapping on private land without written permission.

<sup>53</sup> “An Act to provide for the protection of moose”, c. 144, St. 1913.

<sup>54</sup> Moose from Canada were released on the 10,000 acre Whitney Estate (which became October Mountain State Forest in 1922) in Berkshire County in the early 1900s. When the estate was abandoned c. 1913, four moose escaped and one was shot. See: Eaton,

W.P. 1919. Big game returning to New England hills. Bulletin of the American Game Protective Association 8(1):11.

<sup>55</sup> “An Act to protect wild game and to encourage its propagation”, c. 567, St. 1912.

<sup>56</sup> “An Act to provide for a closed season on quail in the County of Essex for five years”, c. 79, St. 1914.

<sup>57</sup> “Resolve relative to an investigation and a report by the Board of Commissioners of Fisheries and Game relative to pheasants”, c. 70, Resolves of 1913.

<sup>58</sup> “Resolve to provide for a codification of the fish and game laws of the Commonwealth”, c. 107, St. 1913.

<sup>59</sup> “Resolution relative to federal protection of migratory game birds”. Adopted by the Senate April 16, 1912, adopted in concurrence by the House of Representatives April 23, 1912.

<sup>60</sup> Fiftieth Annual Report of the Commissioners on Fisheries and Game for the year 1915. Wright & Potter Printing Co., State Printers, Boston, 234pp.

<sup>61</sup> “An Act relative to the discharge of waste materials into the streams of the Commonwealth”, c. 460, St. 1910.

<sup>62</sup> “An Act to provide for further protection for wild birds and quadrupeds”, c. 240, St. 1915.

<sup>63</sup> Fifty-first Annual Report of the Commissioners on Fisheries and Game for the year 1916. Wright & Potter Printing Co., State Printers, Boston, 100pp.

<sup>64</sup> “Resolve providing for exhibitions and other means of increasing public interest in the protection of fish and game”, c. 159, Resolves of 1916.

<sup>65</sup> Forbush, E.H. 1916. The domestic cat. Bird killer, mouser and destroyer of wild life. Means of utilizing and controlling it. Massachusetts State Board of Agriculture, Boston, Economic Biology Bulletin 2, 112pp.

<sup>66</sup> “An Act relative to the taking of pickerel”, c. 6, St. 1916.

<sup>67</sup> “An Act relative to the open season for brook trout”, c. 25, St. 1916.

<sup>68</sup> “An Act relative to the granting of hunters’ licenses to minors”, c. 74, St. 1916.

<sup>69</sup> “An Act to prohibit the use of artificial light and of vehicles in hunting”, c. 110, St. 1916.

<sup>70</sup> Fifty-second Annual Report of the Commissioners on Fisheries and Game for the year ending November 30, 1917. Wright & Potter Printing Co., State Printers, Boston, 160pp. The quotation is from page 37.

<sup>71</sup> “Resolve providing for exhibitions and other means of increasing public interest in the protection of fish and game”, c. 78, Resolves of 1917.

<sup>72</sup> “An Act relative to the establishment of stations for the rearing of trout in certain counties”, c. 228, St. 1917.

- <sup>73</sup> “An Act to establish a closed season on quail in the counties of Hampden and Middlesex”, c. 157, St. 1917.
- <sup>74</sup> “An Act relative to the open season for the killing of deer”, c. 139, St. 1917.
- <sup>75</sup> “An Act to provide for the protection of birds on the Island of Muskeget”, c. 40, St. 1917.
- <sup>76</sup> Long, J.L. 1981. *Introduced Birds of the World*. David & Charles, London, 528pp. See pages 359-363.
- <sup>77</sup> Morris, R.O. 1907. The introduction of the starling at Springfield, Mass. *Bird-Lore* 9(5):206-207.
- <sup>78</sup> “An Act relative to starlings”, c. 20, St. 1917.
- <sup>79</sup> Eaton, W.P. 1920. *In Berkshire Fields*. Harper & Brothers, New York, 312pp. See pages 196-197.
- <sup>80</sup> “An Act to permit the taking of European hares in the County of Berkshire”, c. 196, St. 1917.
- <sup>81</sup> “An Act relative to taking fish which frequent fresh water”, c. 53, St. 1917.
- <sup>82</sup> “An Act authorizing and directing the Commissioners on Fisheries and Game and their deputies to enforce the laws relating to dogs”, c. 271, St. 1917.
- <sup>83</sup> Fifty-third Annual Report of the Commissioners on Fisheries and Game for the year ending November 30, 1918. Wright & Potter Printing Co., State Printers, Boston, 303pp. The quotation is from page 52.
- <sup>84</sup> “An Act to provide for the construction of fishways on the Merrimack River at Lawrence and Lowell”, c. 174, St. 1918.
- <sup>85</sup> Fifty-fourth Annual Report of the Commissioners on Fisheries and Game for the year ending November 30, 1919. Wright & Potter Printing Co., State Printers, Boston, 197pp.
- <sup>86</sup> Accessed from <http://www.acf.org> on 24 January 2013.
- <sup>87</sup> “An Act to organize in departments the executive and administrative functions of the government”, c. 350, St. 1919. See §§ 39-43 relative to the Department of Conservation.
- <sup>88</sup> “An Act to permit the spearing of carp and eels”, c. 33, St. 1919.
- <sup>89</sup> “An Act to prohibit until the year nineteen hundred and twenty-two the taking of quail in the counties of Essex, Dukes and Nantucket”, c. 40, St. 1919.
- <sup>90</sup> “An Act authorizing the Board of Commissioners on Fisheries and Game to regulate the taking of smelt in great ponds”, c. 57, St. 1919.
- <sup>91</sup> “An Act to establish a close season for the hunting or killing of raccoons”, c. 66, St. 1919.
- <sup>92</sup> “An Act to provide for a bounty on seals”, c. 200, St. 1919.
- <sup>93</sup> “An Act relative to hunting and fishing licenses”, c. 296, St. 1919.

<sup>94</sup> These new provisions mandated a fishing license in order to fish in inland waters stocked by the Commissioners since January 1, 1910. Licensing did not apply to minors or women. It also provided for a minor trapping license, for which the applicant must provide written permission from the parent and for a “combined” hunting and fishing license for non-residents. A legal resident was allowed to hunt or fish on his own property without a license, provided that he was domiciled on the property and that it was used exclusively for agriculture and not for club, shooting or fishing purposes.

“The Stock Must Have Places to Feed and to Breed”: the 1920s.

<sup>1</sup> Grun, B. 1982. *The Timetables of History*. Touchstone Books, Simon & Schuster, New York, 676pp.

<sup>2</sup> Phelan, J.J. and D.G. Robbins. 1930. Public finance of Massachusetts (1890-1930). Pages 329-369 in Hart, A.B. (ed.) *Commonwealth History of Massachusetts*. Vol. 5. The States History Company, New York, 808pp.

<sup>3</sup> Rivers, W.H. 1998. Massachusetts state forestry programs. Pages 147-219 in C.H.W. Foster (ed.) *Stepping Back to Look Forward. A History of the Massachusetts Forest*. Harvard University for the Harvard Forest, Petersham, Mass., 339pp.

<sup>4</sup> Hawes, A.F. 1923. New England forests in retrospect. *Journal of Forestry* 21:209-224. The quotation is from page 224.

<sup>5</sup> Shelford, V.E. (ed.) *Naturalist’s Guide to the Americas*. Williams & Wilkins Co., Baltimore, Md., 761pp. The quotation is from page v. See part IV, Section 2.B.3, pages 318-326 relative to Massachusetts.

<sup>6</sup> Sharp, D.L. [1908] 1922. *The Lay of the Land*. Houghton-Mifflin Co., Boston, 214pp. The quotations are from pages 125-126.

<sup>7</sup> Beston, H. 1928. *The Outermost House*. Doubleday, Doran & Co., New York, 222pp. The quotation is from page 222. Beston’s “Fo’castle” was claimed by the winds and tide in the Blizzard of 1978.

<sup>8</sup> Hemingway, E. 1972. *The Nick Adams Stories*. Charles Scribner’s Sons, New York, 278pp.

<sup>9</sup> Elton, C.S. [1927] 1966. *Animal Ecology*. Methuen & Co., Ltd., London, 207pp. The quotation is from page 189.

<sup>10</sup> Phillips, J.C. 1928. *A Sportsman’s Scrapbook*. Houghton-Mifflin Co., Boston, 212pp.

<sup>11</sup> Phillips, J.C. 1933. *A Sportsman’s Second Scrapbook*. Houghton-Mifflin Co., Boston, 198pp. See Chapter VII.

<sup>12</sup> Allen, G.M. 1939. In memoriam: John Charles Phillips, M.D. *Auk* 56:221-226. The “Phillips Wildlife Research Laboratory” of the Division of Fisheries & Game was named for him and his grandson of the same name was later appointed Commissioner of the Massachusetts Department of Fisheries, Wildlife and Recreational Vehicles.

<sup>13</sup> Act of June 10, 1920, c. 285, 41 Stat. 1063.

- <sup>14</sup> Bean, M.J. and M.J. Rowland. 1997. *The Evolution of National Wildlife Law* (3rd ed.) Praeger Publishers, Westport, Conn., 544pp. See pages 416-422.
- <sup>15</sup> Later amendments expanded the Act to include wild animals generally, bird eggs, animal parts, and fish taken contrary to federal law of that of a foreign country. See Bean et al. (1997):42-43.
- <sup>16</sup> Act of May 20, 1926, c. 346 44 Stat. 756 (codified at 16 U.S.C. 851-856 (1976), repealed 1981 and subsumed into Lacey Act provisions.
- <sup>17</sup> *Missouri v. Holland*, 252 U.S. 416 (1920).
- <sup>18</sup> *Dapson v. Daly*, 257 Mass. 1925 (1926). In this replevin to recover the carcass of a deer, the court also found that the "Huntsman acquires no title to wild animals by pursuit alone, even though there is wounding, unless the animal is followed up and reduced to actual possession".
- <sup>19</sup> Shaw, S.P. 1948. The beaver in Massachusetts. A research and management study. Massachusetts Department of Conservation Division of Fisheries & Game Research Bulletin 11, 44pp.
- <sup>20</sup> Pell, K.W. 1944. Story of a beaver colony. Bulletin of the Massachusetts Audubon Society 27(9):262-266.
- <sup>21</sup> [Fifty-fifth] Annual Report of the Division of Fisheries and Game for the year ending November 30, 1920. Wright & Potter Printing Co., State Printers, Boston, 173pp. The quotation is from page 3.
- <sup>22</sup> "An Act relative to the protection of wild and undomesticated birds", c. 208, St. 1920.
- <sup>23</sup> "An Act relative to hunting and fishing licenses for minors and others", c. 300, St. 1920.
- <sup>24</sup> "An Act to authorize the Commissioners of Fisheries and Game to make rules and regulations relative to the taking of salmon", c. 339, St. 1920. These provisions were not implemented.
- <sup>25</sup> "An Act relative to the taking of fur-bearing animals", c. 437, St. 1920. The Act established a window during which open seasons for the hunting and trapping of fur-bearers may be set, provided a landowner exemption, set restrictions on trap placement and prohibited destruction of muskrat houses.
- <sup>26</sup> "Resolve authorizing the sale by the Commissioner of Conservation of the fish hatchery in the Town of Adams", c. 5, Resolves of 1920. Sale of the Hadley hatchery had been approved in an earlier resolve.
- <sup>27</sup> [Fifty-sixth] Annual Report of the Division of Fisheries and Game for the year ending November 30, 1921. Wright & Potter Printing Co., State Printers, Boston, 195pp. The quotations are from pages 1 and 43.
- <sup>28</sup> "An Act relative to the better protection of birds within reservations", c. 55, St. 1921.
- <sup>29</sup> "An Act relative to the release of wild birds or animals", c. 90, St. 1921.
- <sup>30</sup> "An Act relative to the closed season on hares and rabbits", c. 152, St. 1921.
- <sup>31</sup> "An Act relative to the restrictions on the taking of freshwater fish", c. 188, St. 1921.



<sup>32</sup> “An Act relative to the restrictions on the taking of pickerel”, c. 224, St. 1921.

<sup>33</sup> “An Act providing for the payment by the Commonwealth of damage caused by wild moose”, c. 257, St. 1921.

<sup>34</sup> “An Act relative to certificates of registration to hunt, trap and fish”, c. 467, St. 1921.

<sup>35</sup> [Fifty-seventh] Annual Report of the Division of Fisheries and Game for the year ending November 30, 1922. Wright & Potter Printing Co., State Printers, Boston, 48pp. The quotation is from page 7.

<sup>72</sup> “An Act relative to the taking, marketing and transportation of shellfish”, c. 370, St. 1926.

<sup>73</sup> [Sixty-second] Annual Report of the Division of Fisheries and Game for the year ending November 30, 1927. Department of Conservation, Boston, Public Document No. 25, 84pp. The quotations are from pages 3-4 and 11.

<sup>74</sup> “An Act regulating the taking and possession of Loch Leven trout”, c. 5, St. 1927.

<sup>75</sup> “An Act relative to the taking, possession and sale of bluegills and shiners”, c. 6, St. 1927.

<sup>76</sup> “An Act relative to the payment by the Commonwealth of damages caused by wild deer and moose”, c. 194, St. 1927.

<sup>77</sup> [Sixty-third] Annual Report of the Division of Fisheries and Game for the year ending November 30, 1928. Department of Conservation, Boston, Public Document No. 25, 83pp.

<sup>78</sup> “An Act prohibiting the use of certain apparatus for fishing in inland waters”, c. 8, St. 1928.

<sup>79</sup> “An Act prohibiting the use of traps, nets or snares for the taking or killing of any wild birds and otherwise regulating the hunting thereof”, c. 24, St. 1928.

<sup>80</sup> “An Act prohibiting until the year nineteen hundred and thirty the taking of quail in certain counties”, c. 177, St. 1928.

<sup>81</sup> “An Act extending the open season for deer”, c. 215, St. 1928.

<sup>82</sup> The two-week season was in effect for only three years (1928-30). In 1928, it was open in all counties (except 1 week in Plymouth), in 1929 in all counties, and in 1930 only in the four western counties. See: Shaw, S.P. and C.L. McLaughlin. 1951. The management of white-tailed deer in Massachusetts. Massachusetts Division of Fisheries & Game, Research Bulletin 13, 59pp.

<sup>83</sup> “An Act relative to the taking of certain birds”, c. 271, St. 1928.

<sup>84</sup> “An Act relative to the payment by the Commonwealth of damages caused by wild deer and moose”, c. 361, St. 1928. Damage was to be evaluated by the property owner or agent, the Director or his agent, and an agent of the relevant trustees for county aid to agriculture.

<sup>85</sup> [Sixty-fourth] Annual Report of the Division of Fisheries and Game for the year ending November 30, 1929. Department of Conservation, Boston, Public Document No. 25, 99pp.

- <sup>86</sup> Adams, W.C. 1929. The American system of free shooting and fishing. Transactions of the American Game Conference 16:185-194.
- <sup>87</sup> Chidester, L.W. 1929. The advertising problem of the recreational industry in New England. Thesis, Tufts University, Medford, Mass., 242pp.
- <sup>88</sup> See 16 U.S.C. §§ 715-715d, 715e, 715f-715k, 715n-715r.
- <sup>89</sup> Bean, M.J. and M.J. Rowland. 1997. The Evolution of National Wildlife Law (3rd ed.) Praeger Publishers, Westport, Conn., 544pp. See page 284.
- <sup>90</sup> Gross, A.O. 1928. The Heath Hen. Memoirs of the Boston Society of Natural History 6(4):487-588.
- <sup>91</sup> Gross, A.O. 1929. The last heath hen. Bird-Lore 31(4):252-254.
- <sup>92</sup> "An Act relative to the importation and liberation of certain live birds and quadrupeds", c. 44, St. 1929.
- <sup>93</sup> "An Act relative to the taking, possession and sale of calico bass and crappie", c. 47, St. 1929.
- <sup>94</sup> "An Act relative to the taking, possession or sale of great northern pike or muscalonge", c. 82, St. 1929.
- <sup>95</sup> "Resolve to provide for a survey and revision by a special commission of the game and inland fish laws of the Commonwealth", c. 34, Resolves of 1929.

#### The Economy Collapses, a Profession Arises: the 1930s.

- <sup>1</sup> Grun, B. 1982. The Timetables of History. Touchstone Books, Simon & Schuster, New York, 676pp.
- <sup>2</sup> Filene, E.A. 1933. Unemployment in New England. Some fundamental factors. Pages 65-95 in New England's Prospect: 1933. American Geographical Society, New York, Special Publication No. 16, 502pp.
- <sup>3</sup> Adams, J.T. 1933. The historical background. Pages 1-13 in New England's Prospect: 1933. American Geographical Society, New York, Special Publication No. 16, 502pp.
- <sup>4</sup> Allen, E.S. 1979. The Black Ships. Rumrunners of Prohibition. Little, Brown & Co., Boston, 298pp.
- <sup>5</sup> "An Act annexing the Town of Dana and certain portions of the Towns of Prescott and Greenwich to the Town of Petersham", c. 240, St. 1938.
- <sup>6</sup> Conuel, T. 1981. Quabbin. The accidental wilderness. Massachusetts Audubon Society, Lincoln, Mass., and Stephen Greene Press, Brattleboro, Vt., 66pp.
- <sup>7</sup> Grover, N.C. 1937. The floods of March 1936: Pt. 1— New England Rivers. U.S. Government Printing Office, Washington, D.C., Geological Survey Water Supply Paper 798, 466pp.

<sup>8</sup> Allen, E.S. 1976. *A Wind to Shake the World. The Story of the 1938 Hurricane*. Little, Brown & Co., Boston, 370pp.

<sup>9</sup> Fisher, R.T. 1933. New England forests: biological factors. Pages 213-223 in *New England's Prospect: 1933*. American Geographical Society, New York, Special Publication No. 16, 502pp.

<sup>10</sup> Williams, M. 1989. *Americans and Their Forests. A Historical Overview*. Cambridge University Press, Cambridge, U.K., 599pp.

<sup>11</sup> Rivers, W.H. 1998. Massachusetts state forestry programs. Pages 147-219 in C.H.W. Foster (ed.) *Stepping Back to Look Forward. A History of the Massachusetts Forest*. Harvard University for the Harvard Forest, Petersham, Mass., 339pp.

<sup>12</sup> Foster, C.H.W. 1998. The Massachusetts forest: an historical overview. Pages 2-18 in C.H.W. Foster (ed.) *Stepping Back to Look Forward. A History of the Massachusetts Forest*. Harvard University for the Harvard Forest, Petersham, Mass., 339pp.

<sup>13</sup> American Game Policy Committee. 1930. Report to the American Game Conference on an American Game Policy. *Transactions of the American Game Conference* 17:284-309. The quotation is from page 306.

<sup>14</sup> Shoemaker, C.D. 1935. The model state game and fish administrative law. *Transactions of the American Game Conference* 21:177-183.

<sup>15</sup> Letter from the Council of Sportsmen's Clubs of Massachusetts, dated August 1936, to "Dear Fellow Sportsman" <from the Committee of> Lawrence I. Newton, William H. Brown [and] F.A. McLaughlin. Copy in files of the Division of Fisheries & Wildlife, Westborough, Mass.

<sup>16</sup> See 16 U.S.C. §§ 718-718h, as amended by Act of February 17, 1976, Public Law No. 94-215 § 3, 90 Stat. 189:152.

<sup>17</sup> Trefethen, J.B. 1975. *An American Crusade for Wildlife*. Winchester Press and Boone and Crockett Club, New York, 409pp.

<sup>18</sup> There were nine participating states in the first cooperative venture. See also 16 U.S.C. 753a-753b, 74 Stat. 733, as amended by Public Law 86-686, September 2, 1960.

<sup>19</sup> Now at 16 U.S.C. §§ 669-669i. The quotation is from § 669.

<sup>20</sup> Later amendments provided for a 10% tax on handguns, ammunition, and accessories, and an 11% tax on archery equipment.

<sup>21</sup> "An Act constituting the assent of the Commonwealth to the provisions of the Act of Congress entitled "An Act to provide that the United States shall aid the states in wildlife-restoration projects, and for other purposes", c. 392, St. 1938.

<sup>22</sup> Stoddard, H.L. 1931. *The Bobwhite Quail. Its Habits, Preservation and Increase*. Charles Scribner's Sons, New York, 559pp.

<sup>23</sup> Leopold, A. 1933. *Game Management*. Charles Scribner's Sons, New York, 481pp.

<sup>24</sup> Sears, P.B. 1935. *Deserts on the March*. University of Oklahoma Press, Norman, Okla., 231pp. The quotations are from page 168.

- <sup>25</sup> Accessed from [http://en.wikipedia.org/wiki/civilian\\_conservation\\_corps](http://en.wikipedia.org/wiki/civilian_conservation_corps) on 3 February 2013.
- <sup>26</sup> See also Executive Order 6101, April 5, 1933. The C.C.C. was given agency status by Congress in 1937.
- <sup>27</sup> Accessed from <http://www.mass.gov/dcr/ccs> on 3 February 2013.
- <sup>28</sup> Lincoln was a pioneer in bird-banding and in charge of the U.S. bird-banding program from 1920-1946. He was also instrumental in developing the flyway concept in North America (adopted in 1947), based largely on banding results. See: Hawkins, A.S. et al. 1984. Flyways: Pioneering Waterfowl Management in North America. U.S. Department of the Interior, Fish and Wildlife Service, Washington, D.C., 517pp.
- <sup>29</sup> Phillips, J.C. and F.C. Lincoln. 1930. American Waterfowl. Their Present Situation and the Outlook for the Future. Houghton-Mifflin Co., Boston, 312pp. The quotation is from page 69.
- <sup>30</sup> More Game Birds in America. 1931. More Waterfowl by Assisting Nature. More Game Birds in America, Inc., New York, 106pp. The quotation is from page 3.
- <sup>31</sup> Wildlife Restoration and Conservation. Proceedings of the North American Wildlife Conference called by President Franklin D. Roosevelt. 1936. U.S. Government Printing Office, Washington, D.C., 675pp. The quotation is from page iii.
- <sup>32</sup> Vaughn, G.F. 2002. Pioneer in wildlife conservation. Reuben Edward Trippensee, 1894-1997. The Environmental Institute, University of Massachusetts, Amherst, Mass., Publication No. 02-01, 30pp.
- <sup>33</sup> Trippensee attended the 1936 North American Wildlife Conference and presented a paper on cottontail rabbit management in Michigan (pages 344-352).
- <sup>34</sup> Swanson, G.A. 1987. Creation and early history. Wildlife Society Bulletin 15:9-14.
- <sup>35</sup> Organ, J.F. 2012. Celebrating 75 years. The evolution of a professional society. The Wildlife Professional 6(3):24-31.
- <sup>36</sup> Anonymous. 1938. Officers, committees, and members of The Wildlife Society, 1938. Journal of Wildlife Management 2 (supplement), unpagged.
- <sup>37</sup> Harold Milton Bradbury (1886-1942) and Charles Andrew Stiles (1909-2000).
- <sup>38</sup> [Sixty-fifth] Annual Report of the Division of Fisheries and Game for the year ending November 30, 1930. Department of Conservation, Boston, Public Document No. 25, 115pp. The quotation is from page 6.
- <sup>39</sup> Adams, W.C. 1930. Development of Massachusetts game breeding work. Transactions of the American Game Conference 17:78-90.
- <sup>40</sup> "An Act revising and recodifying the laws relative to game and inland fish", c. 393, St. 1930.
- <sup>41</sup> "An Act to amend chapter one hundred and thirty-one of the General Laws", c. 428, St. 1930. Enacted by the People and by their authority, approved at the State election on November 4, 1930. The text of the Act appears in the Acts and Resolves for 1931.
- <sup>42</sup> [Sixty-sixth] Annual Report of the Division of Fisheries and Game for the year ending

November 30, 1931. Department of Conservation, Boston, Public Document No. 25, 84pp.

<sup>43</sup> “An Act in addition to the general appropriation act making appropriations to supplement certain items contained therein, and for certain new activities and projects”, c. 460, § 269a, St. 1931.

<sup>44</sup> “An Act to prevent the defilement by gulls or terns of waters used for domestic water supply”, c. 21, St. 1931.

<sup>45</sup> “An Act permitting fishing with hook and line for other than commercial purposes”, c. 71, St. 1931.

<sup>46</sup> “An Act granting the consent of the Commonwealth of Massachusetts to the acquisition of migratory game refuges by the federal government”, c. 183, St. 1931.

<sup>47</sup> “An Act relative to sporting licenses authorizing certain minors to fish”, c. 263, St. 1931.

<sup>48</sup> “An Act relative to the holding of field trials for hunting dogs, so-called”, c. 270, St. 1931.

<sup>49</sup> “An Act authorizing the killing of predatory birds and mammals and the possession or carrying of shotguns and rifles in certain cases on Sunday”, c. 272, St. 1931.

<sup>50</sup> “An Act relative to hunting, trapping, and fishing”, c. 436, St. 1931.

<sup>51</sup> [Sixty-seventh] Annual Report of the Division of Fisheries and Game for the year ending November 30, 1932. Department of Conservation, Boston, Public Document No. 25, 57pp.

<sup>52</sup> “An Act relative to the hunting of quail in Berkshire, Franklin and Norfolk counties”, c. 28, St. 1932.

<sup>53</sup> “An Act authorizing the Division of Fisheries and Game to suspend or modify the open season or bag limit as to ruffed grouse and quail”, c. 60, St. 1932.

<sup>54</sup> “An Act relative to the time during which hunting dogs may be trained”, c. 81, St. 1932.

<sup>55</sup> “An Act prohibiting the hunting of beaver”, c. 82, St. 1932.

<sup>56</sup> “An Act relative to the open season for deer in certain counties”, c. 264, St. 1932.

<sup>57</sup> “An Act relative to the issuance of sporting, hunting, fishing and trapping licenses and the fees thereof”, c. 272, St. 1932.

<sup>58</sup> [Sixty-eighth] Annual Report of the Division of Fisheries and Game for the year ending November 30, 1933. Department of Conservation, Boston, Public Document No. 25, 50pp. The quotation is from page 4.

<sup>59</sup> Dexter, R.W. 1944. Ecological significance of the disappearance of eel-grass at Cape Ann, Massachusetts. *Journal of Wildlife Management* 8:173-176.

<sup>60</sup> Townsend, C.W. and F.H. Allen. 1933. Leach’s petrel breeding in Massachusetts. *Auk* 50:426-427.



- <sup>61</sup> “An Act to protect certain birds not now protected by statute”, c. 153, St. 1933.
- <sup>62</sup> “An Act relative to the use, setting and maintenance of certain traps or other devices for the capture of fur-bearing animals”, c. 203, St. 1933.
- <sup>63</sup> “An Act making certain changes in the General Laws relative to inland fish, birds and mammals, and revising the General Laws relating to marine fish and fisheries, including shellfish”, c. 329, St. 1933.
- <sup>64</sup> [Sixty-ninth] Annual Report of the Division of Fisheries and Game for the year ending November 30, 1934. Department of Conservation, Boston, Public Document No. 25, 64pp.
- <sup>65</sup> These were undoubtedly New England cottontails, *Sylvilagus transitionalis*.
- <sup>66</sup> Anderson, K.S. 1991. In memoriam: Joseph Archibald Hagar, 1896-1989. Auk 108:954-955.
- <sup>67</sup> “An Act relative to the taking or possession of great northern pike or muscallonge”, c. 40, St. 1934.
- <sup>68</sup> “An Act prohibiting the sale of black bass wherever taken”, c. 51, St. 1934.
- <sup>69</sup> “An Act authorizing trap, skeet and target shooting on the Lord’s Day in certain cities and towns”, c. 55, St. 1934.
- <sup>70</sup> “An Act establishing the office of state ornithologist in the Division of Fisheries and Game of the Department of Conservation”, c. 173, St. 1934.
- <sup>71</sup> “An Act relative to the hunting or possession of hares and rabbits in Nantucket and Dukes counties”, c. 183, St. 1934.
- <sup>72</sup> “An Act further regulating the use of traps and other devices for the capture of fur-bearing animals and providing for local option thereof”, c. 275, St. 1934. Note: an initiative petition to repeal this law was filed with the Secretary of State in October 1934 to be voted on at the state election on November 6, 1934 (apparently failed?)
- <sup>73</sup> [Seventieth] Annual Report of the Division of Fisheries and Game for the year ending November 30, 1935. Department of Conservation, Boston, Public Document No. 25, 87pp. See pages 38-39 relative to the Nantucket season.
- <sup>74</sup> Stanton, M.G. (ed.) 1994. Nantucket Argument Settlers. Island history at a glance, 1602-1993 (9th ed.) The Inquirer and Mirror, Nantucket, Mass., 318pp. See page 131.
- <sup>75</sup> The Director was instructed by Governor James Michael Curley (1874-1958) to issue an order closing the season at noon on February 12, when about 100 deer had been taken, due to substantial complaints from Nantucket citizens regarding the “slaughter” of deer, and since the objectives of the hunt had been met and there was a possibility of serious injury and loss of life due to the “rapidly increasing” number of hunters. See the *Boston Herald*, February 12, 1935, pages 1 & 13.
- <sup>76</sup> The release of captive Canada geese after the ban resulted in the establishment of feral non-migratory flocks, particularly along the Ipswich and Concord rivers and around man-made reservoirs and impoundments. These geese were particularly successful along the Sudbury Reservoir system in Middlesex County. See: Heusmann, H W 1980. The wild (?) goose. Massachusetts Wildlife 31(3):2-5. There

were an estimated 5000-6000 captive live decoys in 1929; see: Phillips, J.C. 1929. Shooting-stands of Eastern Massachusetts. Privately printed, The Riverside Press, Cambridge, Mass., 158pp.

<sup>77</sup> “An Act relative to the open season on deer in Nantucket County”, c. 5, St. 1935.

<sup>78</sup> “An Act removing certain restrictions on the hunting of quail in Middlesex and Worcester counties”, c. 13, St. 1935.

<sup>79</sup> “An Act authorizing certain traps for the purpose of catching fish bait in the inland waters of the Commonwealth”, c. 98, St. 1935.

<sup>80</sup> “An Act relative to the trapping of mammals on Sunday”, c. 107, St. 1935.

<sup>81</sup> [Seventy-first] Annual Report of the Division of Fisheries and Game for the year ending November 30, 1936. Department of Conservation, Boston, Public Document No. 25, 74pp. The quotations are from pages 24 and 48.

<sup>82</sup> The “western” cottontails were the Eastern cottontail (*Sylvilagus floridanus*) and those from Vermont were the New England cottontail (*Sylvilagus transitionalis*). They are not “subspecies” but are separate species which are genetically distinct and do not cross-breed.

<sup>83</sup> “An Act abolishing the closed season on skunks”, c. 13, St. 1936.

<sup>84</sup> “An Act regulating the number of hooks that may be used in inland fishing”, c. 69, St. 1936.

<sup>85</sup> “An Act abolishing the closed season for deer in Dukes County”, c. 138, St. 1936.

<sup>86</sup> “An Act relative to fishing in ponds situated partly in the Commonwealth and partly in another state”, c. 294, St. 1936.

<sup>87</sup> “Resolve providing for a survey and study by a special commission relative to the administrative functions and financial needs of the Division of Fisheries and Game in the Department of Conservation”, c. 46, Resolves of 1936.

<sup>88</sup> [Seventy-second] Annual Report of the Division of Fisheries and Game for the year ending November 30, 1937. Department of Conservation, Boston, Public Document No. 25, 73pp. The quotation is from page 11.

<sup>89</sup> “An Act further regulating the appropriations for the use of the Department of Conservation”, c. 426, St. 1937.

<sup>90</sup> “An Act changing the titles of certain officers of the Division of Fisheries and Game and gradually abolishing the offices of such officers paid by municipalities”, c. 413, St. 1937.

<sup>91</sup> “An Act relative to the hunting of deer and other mammals”, c. 324, St. 1937.

<sup>92</sup> “An Act relative to the observance of Memorial Day”, c. 38, St. 1937.

<sup>93</sup> “An Act relative to hunting within the boundaries of certain public lands”, c. 89, St. 1937.

<sup>94</sup> “An Act relative to the hunting of quail in Nantucket County”, c. 167, St. 1937.

- <sup>95</sup> “An Act authorizing the issuance to certain officials of certain other states of complimentary certificates entitling them to hunt and fish in the Commonwealth”, c. 191, St. 1937.
- <sup>96</sup> “An Act relative to hunting and other uses of the Province Lands in Provincetown”, c. 373, St. 1937.
- <sup>97</sup> [Seventy-third] Annual Report of the Division of Fisheries and Game for the year ending November 30, 1938. Department of Conservation, Boston, Public Document No. 25, 81pp. The quotation is from page 12.
- <sup>98</sup> “An Act authorizing cities and towns to appropriate money for stocking inland waters with fish and for liberating game therein”, c. 142, St. 1938.
- <sup>99</sup> “An Act relative to the setting of fires in the open air”, c. 204, St. 1938.
- <sup>100</sup> “Resolve providing for a survey and study of the fish and game laws by the Department of Conservation”, c. 9, Resolves of 1938.
- <sup>101</sup> [Seventy-fourth] Annual Report of the Division of Fisheries and Game for the year ending November 30, 1939. Department of Conservation, Boston, Public Document No. 25, 76pp.
- <sup>102</sup> “An Act making certain changes in the organization and functions of the Department of Conservation”, c. 491, St. 1939.
- <sup>103</sup> “An Act making certain changes in the General Laws relative to the reports of state officials which have become necessary or advisable by reason of the initiative amendment to the Constitution providing for biennial sessions of the General Court and for a biennial budget”, c. 499, St. 1939. See § 4A.
- <sup>104</sup> Project W-1-R, “Massachusetts Waterfowl Research”.

#### The War Years and the Aftermath: 1940-1947.

- <sup>1</sup> Beevor, A. 2012. *The Second World War*. Little, Brown & Co., Boston, 863pp.
- <sup>2</sup> Grun, B. 1982. *The Timetables of History*. Touchstone Books, Simon & Schuster, New York, 676pp.
- <sup>3</sup> Trefethen, J.B. 1975. *An American Crusade for Wildlife*. Winchester Press and Boone and Crockett Club, New York, 409pp.
- <sup>4</sup> Tager, J., R.W. Wilkie and L.W. Owens. 1991. Metropolitan Commonwealth, 1900-1950. Pages 38-45 in R.W. Wilkie and J. Tager (eds.) *Historical Atlas of Massachusetts*. University of Massachusetts Press, Amherst, Mass., 152pp.
- <sup>5</sup> Murie, A. 1940. Ecology of the coyote in the Yellowstone. U.S. National Park Service, *Fauna of the National Parks of the United States*, Bulletin No. 4, 206pp.
- <sup>6</sup> Goldman, E.A. 1930. The coyote—archpredator. *Journal of Mammalogy* 11: 325-334.
- <sup>7</sup> The American Committee for International Wild Life Protection was founded in 1930 by the Boone & Crockett Club, with John C. Phillips as its chair. It was later in-

corporated into the International Union for the Conservation of Nature <and Natural Resources> and is now known as the American Committee for International Conservation. See also [http://en.wikipedia.org/wiki/Boone\\_and\\_Crockett\\_Club](http://en.wikipedia.org/wiki/Boone_and_Crockett_Club), accessed on 2 February 1913.

<sup>8</sup> Allen, G.M. 1942. Extinct and Vanishing Mammals of the Western Hemisphere, with the Marine Mammals of all the Oceans. American Committee for International Wildlife Protection, Special Publication No. 11, 620pp.

<sup>9</sup> Gabrielson was the first Director of the U.S. Fish and Wildlife Service and later the President of the Wildlife Management Institute.

<sup>10</sup> Gabrielson, I.N. 1941. Wildlife Conservation. The Macmillan Co., New York, 250pp. (2nd ed., 1959). The quotation is from page 106 of the first edition.

<sup>11</sup> Gabrielson, I.N. 1953. Wildlife Refuges. The Macmillan Co., New York, 257pp.

<sup>12</sup> Leopold, A. 1943. Wildlife in American culture. Journal of Wildlife Management 7:1-6. The quotation is from page 6. See also Leopold's earlier paper (Journal of Forestry 31:634-643, 1931).

<sup>13</sup> Among many other expositions of how humans view animals, see: Allen, M. 1983. Animals in American Literature. University of Illinois Press, Urbana, Ill., 210pp.; Gillespie, A.K. and J. Mechling (eds.) 1987. American Wildlife in Symbol and Story. University of Tennessee Press, Knoxville, Tenn., 251pp.; and Herman, D.J. 2001. Hunting and the American Imagination. Smithsonian Institution Press, Washington, D.C., 356pp.

<sup>14</sup> Babcock, H. 1947. My Health is Better in November. University of South Carolina Press, Columbia, S.C., 284pp.

<sup>15</sup> Spiller, B.L. [1935] 1947. Grouse Feathers. The Macmillan Co., New York, 207pp.

<sup>16</sup> Leopold, A. 1949. A Sand County Almanac and Sketches Here and There. Oxford University Press, New York, 226pp.

<sup>17</sup> Flader, S.L. 1974. Thinking Like a Mountain. Aldo Leopold and the Evolution of an Ecological Attitude toward Deer, Wolves, and Forests. University of Missouri Press, Columbia, 284pp. See esp. pages 101-102 and 267-268.

<sup>18</sup> Vogt, W. 1948. Road to Survival. William Sloane Associates, Inc., New York, 335pp.

<sup>19</sup> The writings of both Vogt and Osborn stimulated a resurgent interest in the ideas of Thomas Robert Malthus (1766-1834) whose *Essay on the Principles of Population* (1798) predicted a return to subsistence-level society once human population outpaced agricultural food production.

<sup>20</sup> Osborn, F. 1948. Our Plundered Planet. Little, Brown & Co., Boston, 217pp. The quotations are from pages ix and 201.

<sup>21</sup> Bald Eagle Protection Act of 1940 (16 U.S.C. 668-668d, 54 Stat. 250) as amended. Approved June 8, 1940, and amended by P.L. 86-70 (73 Stat. 143) June 25, 1959; P.L. 87-884 (76 Stat. 1346) October 24, 1962; P.L. 92-535 (86 Stat. 1064) October 23, 1972; and P.L. 95-616 (92 Stat. 3114) November 8, 1978.

<sup>22</sup> Act of March 10, 1934, c. 55 § 2, 48 Stat. 401. Now codified at 16 U.S.C. §§ 661-667e.

- <sup>23</sup> Bean, M.J. and M.J. Rowland. 1997. *The Evolution of National Wildlife Law* (3rd ed.) Praeger Publishers, Westport, Conn., 544pp. See Chapter 11.
- <sup>24</sup> Newell, C. 1899. Marsupialia or Marsupiata. *The Museum* [Albion, N.Y.] 5:183-185.
- <sup>25</sup> Anonymous. 1944. Field notes. *Bulletin of the Massachusetts Audubon Society* 8(4):140. (Falmouth, adult & 2 young, suspected release from Camp Edwards), and, Snyder, D.E. 1944. Animal tales from the hills. *Bulletin of the Massachusetts Audubon Society* 8(4):124-126 (Dalton).
- <sup>26</sup> Seventy-fifth Annual Report of the Division of Fisheries and Game for the year ending November 30, 1940. Part V (pages 22-44) of the Annual Report of the Commissioner of Conservation. Public Document No. 73. Department of Conservation, Boston, 59pp.
- <sup>27</sup> First Annual Report of the Division of Wildlife Research and Management for the year ending November 30, 1940. Part IV (pages 19-22) of the Annual Report of the Commissioner of Conservation. Public Document No. 73. Department of Conservation, Boston, 59pp.
- <sup>28</sup> The Annual Reports of the Division of Wildlife Research & Management for the years 1941-1947 are missing from the files of the Division of Fisheries & Wildlife.
- <sup>29</sup> Seventy-sixth Annual Report of the Division of Fisheries and Game for fiscal year December 1, 1940 to November 30, 1941. Part V of the Annual Report of the Commissioner of Conservation. [Division of Fisheries & Game], Boston, 35pp.
- <sup>30</sup> "An Act repealing certain provisions of law relative to the appointment of a special officer by the Town of Nantucket to enforce the provisions of law relative to the protection of birds on the island of Muskeget, their eggs and young", c. 26, St. 1941.
- <sup>31</sup> "An Act penalizing the taking of fish from Big Homers Pond in the Town of West Tisbury otherwise than by means of fly fishing", c. 157, St. 1941. NOTE; this statute was apparently in effect at least through 1969.
- <sup>32</sup> "An Act imposing a penalty for carrying firearms while intoxicated in places where hunting is permitted", c. 159, St. 1941.
- <sup>33</sup> "An Act relative to the possession of shotguns and shotgun shells as constituting prima facie evidence of the unlawful hunting of deer", c. 175, St. 1941.
- <sup>34</sup> "An Act relative to the revision and codification of the laws relative to inland fisheries, birds and mammals", c. 599, St. 1941. Includes a specific summary of the powers of the Director, as in effect at that time.
- <sup>35</sup> "An Act further defining the words "birds" and "mammals" in the laws relating to inland fisheries, birds and mammals", c. 663, St. 1941.
- <sup>36</sup> Seventy-seventh Annual Report of the Division of Fisheries and Game for fiscal year December 1, 1941 to November 30, 1942. Part V of the Annual Report of the Commissioner of Conservation. [Division of Fisheries & Game], Boston, 30pp.
- <sup>37</sup> Swartz, A.H. 1942. Fisheries survey report—1942. Division of Fisheries & Game, Boston, 180pp.
- <sup>38</sup> McCabe, B.C. 1942. The distribution of fishes in the streams of western Massachusetts. Dissertation, Cornell University, Ithaca, N.Y., 181pp.



<sup>39</sup> McLaughlin, C.L. 1942. Food habits of the ring-necked pheasant in the Connecticut River Valley, Massachusetts. Mass. Department of Conservation, Division of Wildlife Research & Management, Research Bulletin No. 1, 51pp. Based on McLaughlin's thesis at Massachusetts State College.

<sup>40</sup> There were six subsequent Research Bulletins dealing with pheasants: Wandell, "1943 progress report on the pheasant banding study", Res. Bull, 2, 1944; Wandell, "An appraisal of pheasant stocking in Massachusetts", Res. Bull. 3, 1945; Wandell, "Results of the 1943 and 1944 pheasant banding studies", Res. Bull. 4, 1945; Wandell, "Progress report of the ring-necked pheasant investigations in the Connecticut River Valley", Res. Bull, 5, 1942; Pushee, "1945 progress report on the pheasant banding study", Res. Bull. 8, 1946; and Pushee, "Summary report: pheasant banding studies, 1943-46", Res. Bull. 9, 1948.

<sup>41</sup> Seventy-eighth Annual Report of the Division of Fisheries and Game for fiscal year December 1, 1942 to June 30, 1943. Part V of the Annual Report of the Commissioner of Conservation. [Division of Fisheries & Game], Boston, 19pp. Note that this is an 8-month report due to a change in the state's fiscal year.

<sup>42</sup> "An Act relative to the open season on opossums or raccoons", c. 90, St. 1943.

<sup>43</sup> "An Act permitting the sale of heads, hides and hoofs of deer in certain instances", c. 100, St. 1943.

<sup>44</sup> "An Act providing for the issuance of fishing licenses without charge to certain recipients of old age assistance, so-called", c. 265, 1943. Persons over 70 were eligible for a free license; those under 70 must be receiving old age assistance in order to receive one.

<sup>45</sup> "An Act temporarily authorizing the issuance to person in the military or naval service of the United States of special certificates entitling them to hunt and fish in this Commonwealth", c. 388, St. 1943. Residents were entitled to a free certificate; non-residents, \$2.00. This law was only in effect during the state of war.

<sup>46</sup> Seventy-ninth Annual Report of the Division of Fisheries and Game for fiscal year July 1, 1943 to June 30, 1944. Part V of the Annual Report of the Commissioner of Conservation. [Division of Fisheries & Game], Boston, 21pp.

<sup>47</sup> Eightieth Annual Report of the Division of Fisheries and Game for fiscal year July 1, 1944 to June 30, 1945. Part V of the Annual Report of the Commissioner of Conservation. [Division of Fisheries & Game], Boston, 21pp. The quotation is from page 8.

<sup>48</sup> Komins, M.W. 1979. Wildlife sanctuaries. Mass. Division of Fisheries & Wildlife, Westborough, Mass., 47pp. The Robson Sanctuary was the last sanctuary obtained by the Division until a few acres at Tarpaulin Cove on Naushon Island was transferred by the U.S. General Services Administration in 1977.

<sup>49</sup> "An Act defining the term "loaded shotgun or rifle" as used in laws relative to inland fisheries, birds and mammals", c. 83, St. 1945.

<sup>50</sup> "An Act providing for the enforcement of certain provisions of law relating to firearms and other dangerous weapons and ammunition therefor by officers charged with the enforcement of the fish and game laws", c. 132, St. 1945.

<sup>51</sup> "An Act relative to the protection of the wood duck", c. 232, St. 1945.

- <sup>52</sup> “An Act authorizing the hunting or trapping and the possession of beaver during a portion of the year nineteen hundred and forty-six”, c. 251, St. 1945.
- <sup>53</sup> Eighty-first Annual Report of the Division of Fisheries and Game for fiscal year July 1, 1945 to June 30, 1946. Part V of the Annual Report of the Commissioner of Conservation. [Division of Fisheries & Game], Boston, 29pp. The quotation is from page 1.
- <sup>54</sup> “An Act establishing and setting up on the books of the Commonwealth a separate fund to be known as the Inland Fisheries and Game Fund”, c. 548, St. 1945.
- <sup>55</sup> McCabe, B.C. (compiler) 1948. Fisheries report for lakes of central Massachusetts, 1944-1945. Department of Conservation, Division of Fisheries & Game, Boston, 254pp.
- <sup>56</sup> “An Act penalizing the use of bait other than natural bait in ice fishing elsewhere than in the Connecticut River”, c. 79, St. 1946.
- <sup>57</sup> “An Act relative to hunting on November eleventh or the day following when November eleventh occurs on Sunday”, c. 190, St. 1946.
- <sup>58</sup> “An Act penalizing the use of certain firearms for hunting purposes”, c. 334, St. 1946.
- <sup>59</sup> An Act permitting fishing in certain parts of the Quabbin Reservoir from the shore thereof”, c. 421, St. 1946.
- <sup>60</sup> Eighty-second Annual Report of the Division of Fisheries and Game for fiscal year July 1, 1946 to June 30, 1947. Part V of the Annual Report of the Commissioner of Conservation. [Division of Fisheries & Game], Boston, 30pp.
- <sup>61</sup> Friends of the Upton State Forest, Inc., *Newsletter* v. 6(1), Winter 2011, page 2. Records of the Division of Fisheries & Wildlife indicate that the Phillips Laboratory was occupied in 1945.
- <sup>62</sup> Hagar, J.A. 1969. History of the Massachusetts peregrine falcon population, 1935-1957. Pages 123-131 in J.J. Hickey (ed.) *Peregrine Falcon Populations: Their Biology and Decline*. University of Wisconsin Press, Madison, Wisc., 596pp.
- <sup>63</sup> Berger, D.D., C.R. Sindelar, Jr. and K.E. Gamble. 1969. The status of breeding peregrines in the eastern United States. Pages 165-173 in J.J. Hickey (ed.) *Peregrine Falcon Populations: Their Biology and Decline*. University of Wisconsin Press, Madison, Wisc., 596pp.
- <sup>64</sup> Ratcliffe, D. 2003. Discovering the causes of peregrine decline. Pages 23-33 in T.J. Cade and W. Burnham (eds.) *Return of the Peregrine. A North American Saga of Tenacity and Teamwork*. The Peregrine Fund, Boise, Id., 394pp.
- <sup>65</sup> “An Act relative to the revocation of certain licenses issued by the Division of Fisheries and Game”, c. 193, St. 1947.
- <sup>66</sup> “An Act relative to fishing privileges for patients in veteran’s hospitals in Massachusetts”, c. 245, St. 1947.
- <sup>67</sup> “An Act directing the Metropolitan District Commission to promulgate rules and regulations relative to the use of its lands and waters at Quabbin Reservoir for fishing purposes”, c. 300, St. 1947.

<sup>68</sup> Eighty-third Annual Report of the Division of Fisheries and Game for fiscal year July 1, 1947 to June 30, 1948. Division of Fisheries & Game, Boston, 26pp.

<sup>69</sup> “An Act providing for a close season on all birds and mammals during certain periods”, c. 249, St. 1948.

<sup>70</sup> “An Act relative to the issuance of sporting, hunting, fishing, and trapping licenses”, c. 302, St. 1948.

<sup>71</sup> “An Act further regulating the trapping of certain animals, and providing for the registration of traps used therefor”, c. 615, St. 1948.

<sup>72</sup> “An Act relative to the Department of Conservation”, c. 651, St. 1948. See esp. §§ 1-7, relative to the Fisheries and Game Board.

“Conservation is the Science of Man’s Successful Living in Relation  
to Nature and Her Resources”: 1948-1959.

<sup>1</sup> Grange, W.B. 1949. The Way to Game Abundance, with an Explanation of Game Cycles. Charles Scribner’s Sons, New York, 365pp. The quotation is from page 350.

<sup>2</sup> Grun, B. 1982. The Timetables of History. Touchstone Books, Simon & Schuster, New York, 676pp.

<sup>3</sup> Department of Commerce. 1975. Historical Statistics of the United States. Colonial Times to 1970. Part I. U.S. Department of Commerce, Bureau of the Census, Washington, D.C., 609pp.

<sup>4</sup> Tager, J., R.W. Wilkie and L.W. Owens. 1991. Metropolitan Commonwealth, 1900-1950. Pages 38-45 in R.W. Wilkie and J. Tager (eds.) Historical Atlas of Massachusetts. University of Massachusetts Press, Amherst, Mass., 152pp.

<sup>5</sup> Rivers, W.H. 1998. Massachusetts state forestry programs. Pages 147-219 in C.H.W. Foster (ed.) Stepping Back to Look Forward. A History of the Massachusetts Forest. Harvard University for the Harvard Forest, Petersham, Mass., 339pp.

<sup>6</sup> Allen, D.L. [1954] 1962. Our Wildlife Legacy. Funks & Wagnalls, New York, 422pp. The quotation is from page 340.

<sup>7</sup> Errington, P.L. 1957. Of Men and Marshes. Iowa State University Press, Ames, Ia., 150pp. The quotation is from page viii.

<sup>8</sup> Greenway, J.C., Jr. 1958. Extinct and Vanishing Birds of the World. American Committee for International Wildlife Protection, New York, Special Publication No. 13, 518pp.

<sup>9</sup> Matthiessen, P. 1959. Wildlife in America. Viking Press, New York, 304pp. (Rev. ed., 1987)

<sup>10</sup> Ruark, R. 1957. The Old Man and the Boy. Holt, Rinehart & Winston, New York, 303pp., and, Ruark, R. 1961. The Old Man’s Boy Grows Older. Holt, Rinehart & Winston, New York, 302pp.

<sup>11</sup> The “Old Man” is modeled on both of Ruark’s grandfathers, but principally on his maternal grandfather, Captain Edward (“Ned”) Hall Adkins.

- <sup>12</sup> Petrie, C. (ed.) 1987. The Corey Ford Sporting Treasury. Willow Creek Press, Wautoma, Wisc., 351pp.
- <sup>13</sup> Ford's poignant short story "The Road to Tinkhamtown" (written in 1964, published in 1969) has been praised as one of the best pieces of outdoor literature ever written.
- <sup>14</sup> Carlander, K.D. 1970. Education and training. Pages 57-69 in N.G. Benson (ed.) A Century of Fisheries in North America. American Fisheries Society, Washington, D.C., Special Publication No. 7, 330pp.
- <sup>15</sup> Ricker, W.E. 1948. Methods of Estimating Vital Statistics of Fish Populations. Indiana University Press, Bloomington, Ind., 101pp.
- <sup>16</sup> Ricker, W.E. 1958. Handbook of Computations for Biological Statistics of Fish Populations. Fisheries Research Board of Canada, Bulletin 119, 300pp.
- <sup>17</sup> Lagler, K.F. 1952. Freshwater Fishery Biology. W.C. Brown Co., Dubuque, Ia., 360pp. Primarily a laboratory or field manual, this book arose from earlier mimeographed or lithographed editions, and was succeeded by a second edition in 1956.
- <sup>18</sup> Rounsefell, G.A. and W. Harry Everhart. 1953. Fishery Science, Its Methods and Applications. J. Wiley & Sons, New York, 444pp. Revised and updated in 1975.
- <sup>19</sup> Larson, J.S. and F. Greeley. 1988. William Gulliver Sheldon, 1912-1987. Wildlife Society Bulletin 16:95-96.
- <sup>20</sup> Act of August 9, 1950, c. 658, § 2, 64 Stat. 431; now codified at 16 U.S.C. §§ 777-777k, with amendments through 2005.
- <sup>21</sup> "An Act constituting the assent of the Commonwealth to the provisions of the Act of Congress entitled "An Act to provide that the United States shall aid the states in fish restoration and management projects, and for other purposes", c. 207, St. 1951.
- <sup>22</sup> Belanger, D.O. 1988. Managing American Wildlife. A History of the International Association of Fish and Wildlife Agencies. University of Massachusetts Press, Amherst, Mass., 247pp. See page 178.
- <sup>23</sup> Shaw, S.P. 1951. The effect of insufficient harvests on an island deer herd. Paper presented at the Northeastern Fish and Wildlife Conference, Wilmington, Delaware, 6pp.
- <sup>24</sup> Leopold, A., L.K. Sows and D.L. Spencer. 1947. A survey of over-populated deer ranges in the United States. Journal of Wildlife Management 11:162-177. Note: the date when deer were introduced to Nantucket and the alleged fact of their later "extermination" are both erroneous.
- <sup>25</sup> Jones, W.R. 1950. The deer herd of Prescott Peninsula, Quabbin Reservation, and its ecology. Thesis, University of Massachusetts, Amherst, 123pp.
- <sup>26</sup> Silver, H. and W.T. Silver. 1969. Growth and behavior of the coyote-like canid of northern New England with observations on canid hybrids. Wildlife Monographs 17:1-41.
- <sup>27</sup> Severinghaus, C.W. 1974. Notes on the history of wild canids in New York. New York Fish and Game Journal 21:117-125.

<sup>28</sup> The taxonomy of *Canis* spp. in northeastern North America is contentious, and sometimes considered to encompass the gray wolf (*C. lupus*), the so-called eastern or Algonquin wolf (*C. lycaon*), and the coyote (*C. latrans*), as well as hybrids between and among these taxa. See (e.g.) Grewal, S.K., P.J. Wilson, T.K. King, K. Shami, M.T. Theberge, J.B. Theberge, and B.N. White. 2004. A genetic assessment of the eastern wolf (*Canis lycaon*) in Algonquin Provincial Park. *Journal of Mammalogy* 85:625-632.

<sup>29</sup> Until alternate taxonomy is widely accepted, I continue to refer to wild *Canis* in Massachusetts as “coyotes” (*C. latrans*), following *Mammal Species of the World* (3rd ed.) (Wilson & Reeder, Johns Hopkins University Press, 2005), accessed from [www.bucknell.edu/msw3/](http://www.bucknell.edu/msw3/) on 15 February 2013. See the account for *Canis lupus*.

<sup>30</sup> Pringle, L.P. 1960. Notes on coyotes in southern New England. *Journal of Mammalogy* 41:278.

<sup>31</sup> Eighty-fourth Annual Report [of the] Division of Fisheries and Game covering the fiscal year from July 1, 1948 to June 30, 1949. Division of Fisheries & Game, Massachusetts Department of Conservation, Boston, 38pp.

<sup>32</sup> Minutes of <the Fisheries and Game> Board Meeting, Thursday, October 21, 1948, 15 Ashburton Place, Boston, Mass. On file with the Division of Fisheries & Wildlife, Field Headquarters.

<sup>33</sup> McCabe, B.C. and A.H. Swartz. 1952. Fisheries Report—Lakes of Plymouth County—1946, Berkshire County—1947, Barnstable County—1948. Division of Fisheries & Game [Boston], 269pp.

<sup>34</sup> “An Act relative to the hunting of deer”, c. 283, St. 1949.

<sup>35</sup> “An Act authorizing the granting of fishing licenses to certain aliens”, c. 516, St. 1949.

<sup>36</sup> “An Act relative to the form of licenses issued for sporting, hunting, fishing, and trapping”, c. 545, St. 1949.

<sup>37</sup> “An Act relative to the payment of compensation for damage caused by deer or moose”, c. 751, St. 1949.

<sup>38</sup> “An Act further regulating the trapping of certain animals and providing for the registration of traps used therefor”, c. 758, St. 1949.

<sup>39</sup> “Resolve providing for an investigation and study by a special commission relative to the organization, administration, powers and duties of the Department of Conservation and of similar departments or authorities in other states”, c. 50, Resolves of 1949.

<sup>40</sup> Eighty-fifth Annual Report [of the] Massachusetts Division of Fisheries and Game covering the fiscal year from July 1, 1949 to June 30, 1950. Division of Fisheries & Game [Boston], 48pp.

<sup>41</sup> McCabe, B.C. 1952. Fisheries report for lakes of Northeastern Massachusetts—1949. Division of Fisheries & Game, Bureau of Wildlife Research & Management, 115pp.

<sup>42</sup> McCabe, B.C. 1953. Fisheries report for lakes and ponds of Northcentral Massachusetts—1950. Division of Fisheries & Game, Bureau of Wildlife Research & Management, 122pp.



- <sup>43</sup> “An Act authorizing the Division of Fisheries and Game to enter into an agreement with the Secretary of the Army of the United States for the purpose of acquiring a license for the Commonwealth to use the Birch Hill area for fish and wildlife management”, c. 723, St. 1950.
- <sup>44</sup> Hagar, J.A. 1948. Black duck mortality in the Parker River region, winter of 1947-48. Mass. Department of Conservation, Boston, 31pp.
- <sup>45</sup> “An Act further regulating the trapping of certain mammals”, c. 107, St. 1950.
- <sup>46</sup> “An Act further regulating the trapping of mammals”, c. 138, St. 1950.
- <sup>47</sup> “An Act providing for the issuance of fishing licenses without charge to blind persons”, c. 233, St. 1950.
- <sup>48</sup> “An Act relative to the close season on all birds and mammals”, c. 234, St. 1950.
- <sup>49</sup> “An Act relative to the training of hunting dogs”, c. 235, St. 1950.
- <sup>50</sup> “An Act further regulating the taking and hunting of certain mammals”, c. 438, St. 1950.
- <sup>51</sup> “Resolve providing for a survey of the great ponds of the Commonwealth and the rights of way thereof”, c. 24, Resolves of 1950.
- <sup>52</sup> [Eighty-sixth] Annual Report [of the] Massachusetts Division of Fisheries and Game [Department of Conservation, Boston], 1950•1951, 17pp.
- <sup>53</sup> The first project was F-1-R “Stream Investigations”. Projects F-2-C “Coordination” and F-3-R “Pond Investigations” were initiated at about the same time.
- <sup>54</sup> Pollack, E.M. and W.G. Sheldon, 1951. The bobcat in Massachusetts. Mass. Division of Fisheries & Game, Upton, Mass., 24pp.
- <sup>55</sup> “An Act abolishing the closed season on wood duck”, c. 217, St. 1951.
- <sup>56</sup> “An Act changing the open season on fur-bearing mammals”, c. 294, St. 1951.
- <sup>57</sup> “An Act relative to the use of firearms”, c. 353, St. 1951.
- <sup>58</sup> “An Act increasing the fees for sporting, hunting, fishing, and trapping licenses”, c. 405, St. 1951.
- <sup>59</sup> “An Act relative to the keeping of certain records by fur buyers”, c. 429, St. 1951.
- <sup>60</sup> “An Act enabling the Division of Fisheries and Game in the Department of Conservation to acquire certain lands and to regulate their use”, c. 535, St. 1951.
- <sup>61</sup> “Resolve authorizing the continuation of the survey by the Department of Public Works of the great ponds of the Commonwealth and the rights of way thereto”, c. 28, Resolves of 1951.
- <sup>62</sup> [Eighty-seventh] Annual Report [of the] Mass[achusetts] Division of Fisheries and Game [Department of Conservation, Boston], [July 1, 1951 to June 30] 1952, 30pp. The quotation is from page 7.
- <sup>63</sup> Stroud, R.H. 1955. Fisheries report for some central, eastern, and western Massachusetts lakes, ponds, and reservoirs, 1951-52. Division of Fisheries and Game,

Bureau of Wildlife Research and Management, 447pp.

<sup>64</sup> “An Act relative to the carrying and use of bows and arrows while hunting”, c. 284, St. 1952.

<sup>65</sup> “An Act enabling the director of the Division of Fisheries and Game in the Department of Conservation to acquire certain land known as the Pantry Brook area in the Town of Sudbury”, c. 449, St. 1952.

<sup>66</sup> “An Act increasing the fee for certain trapping licenses”, c. 454, St. 1952.

<sup>67</sup> “An Act further regulating the discharge of injurious substances into waters used for fishing”, c. 501, St. 1952.

<sup>68</sup> [Eighty-eighth] Annual Report [of the] Massachusetts Division of Fisheries and Game [Department of Conservation, Boston], [July 1, 1952 to June 30] 1953, 55pp.

<sup>69</sup> “An Act relative to the organization, powers and duties of the Department of Natural Resources”, c. 631, St. 1953.

<sup>70</sup> “An Act authorizing the director of the Division of Fisheries and Game to regulate the taking of certain fish”, c. 478, St. 1953.

<sup>71</sup> “An Act authorizing the director of the Division of Fisheries and Game to regulate the taking of deer”, c. 480, St. 1953.

<sup>72</sup> “An Act authorizing the director of the Division of Fisheries and Game to regulate the hunting or taking of gray squirrels, hares and rabbits”, c. 481, St. 1953.

<sup>73</sup> “An Act authorizing the director of the Division of Fisheries and Game to regulate the hunting and taking of mammals”, c. 482, St. 1953.

<sup>74</sup> “An Act allowing the use of dogs for waterfowl hunting during the open season on deer”, c. 115, St. 1953.

<sup>75</sup> “An Act providing for the display of sporting, hunting, fishing or trapping licenses”, c. 218, St. 1953.

<sup>76</sup> “An Act requiring the tagging of deer”, c. 241, St. 1953.

<sup>77</sup> “An Act relative to the protection of salmon on the Connecticut River or its tributaries”, c. 285, St. 1953.

<sup>78</sup> “An Act authorizing the Commonwealth to enter into a compact with the State of Connecticut for inaugurating legislation to protect the return of salmon and other migratory fish to the Connecticut River”, c. 599, St. 1953.

<sup>79</sup> [Eighty-ninth] Annual Report [of the] Massachusetts Division of Fisheries and Game [Boston], [July 1, 1953 to June 30] 1954, 32pp.

<sup>80</sup> Couture, L.H. 1954. Seventy-four million dollars a year just for fun. Massachusetts Division of Fisheries & Game [Boston], Research Bulletin No. 14 [first ed. not numbered], 10pp. Supplement, “How It was Done” [by] S. Russell and L.H. Couture, University of Massachusetts Extension Service, Amherst, 8pp. Second ed., 1957.

<sup>81</sup> Hagar, J.A. 1954. Northeastern flyway: a proposal for more effective waterfowl management in the New England coastal states and Long Island. Division of Fisheries &

Game, Bureau of Wildlife Research & Management [Boston], 28pp.

<sup>82</sup> “An Act relative to the revocation of certain licenses issued by the Division of Fisheries and Game”, c. 88, St. 1954.

<sup>83</sup> “An Act defining coastal waters as used in the laws relating to fisheries and game”, c. 92, St. 1954.

<sup>84</sup> “An Act regulating the taking of trout in coastal waters”, c. 99, St. 1954.

<sup>85</sup> “An Act relative to sporting, hunting, fishing and trapping licenses issued to certain minors”, c. 457, St. 1954.

<sup>86</sup> [Ninetieth] Annual Report [of the] Massachusetts Division of Fisheries and Game [Boston], [July 1, 1954 to June 30] 1955, 30pp.

<sup>87</sup> Boyle, J.D. 1955. An evaluation of stocking New Brunswick hare in Massachusetts mixed forest habitat. Thesis, University of Massachusetts, Amherst, 67pp.

<sup>88</sup> “An Act providing that applicants for sporting, hunting, fishing, or trapping licenses need not personally appear”, c. 209, St. 1955.

<sup>89</sup> “An Act authorizing the issuance of fishing licenses to aliens”, c. 292, St. 1955.

<sup>90</sup> “An Act authorizing the sale of live bait on the Lord’s Day”, c. 304, St. 1955.

<sup>91</sup> “An Act authorizing the director of the Division of Fisheries and Game to acquire certain lands in the Towns of Barre and Phillipston”, c. 356, St. 1955.

<sup>92</sup> “An Act relative to the revocation of hunting, fishing, and trapping licenses”, c. 647, St. 1955.

<sup>93</sup> “Resolve providing for an investigation and study by a special commission relative to hunting and fishing within the Commonwealth and certain matters relating thereto, including the subject of ground water level within the Commonwealth”, c. 84, St. 1955.

<sup>94</sup> [Ninety-first] Annual Report [of the] Massachusetts Division of Fisheries and Game [Boston], [July 1, 1955 to June 30] 1956, 30pp. The quotation is from page 1.

<sup>95</sup> Hoar, A.R. 1990. Partial chronology of events associated with fish passage on the mainstem Connecticut River. U.S. Fish & Wildlife Service, Newton Corner, Mass., [10] pp., unpublished document.

<sup>96</sup> Saville, W.S. 1958. Fur facts and trapping in Massachusetts. Division of Fisheries & Game, Boston, 41pp.

<sup>97</sup> The first issue, numbered Vol. VII, No. 1, dated January-February 1956, featured the Quabbin Reservoir on the cover, and contained the Director’s remarks, and articles on fishing at Quabbin, forestry and fishing, and gun safety, as well as a pictorial on the raising and stocking of trout.

<sup>98</sup> “An Act relative to the penalty for hunting birds by boats and the possession of firearms therein”, c. 254, St. 1956.

<sup>99</sup> “An Act authorizing the director of the Division of Fisheries and Game to take certain lands by eminent domain”, c. 326, St. 1956.

<sup>100</sup> “An Act relative to permits for netting certain fish in the inland waters of the Commonwealth”, c. 420, St. 1956.

<sup>101</sup> “Resolve reviving and continuing the special commission relative to hunting and fishing within the Commonwealth and certain matters relating thereto, including the subject of the ground water level within the Commonwealth”, c. 23, Resolves of 1956.

<sup>102</sup> “Resolve increasing the scope of the investigation and study of the commission established to make an investigation and study relative to hunting and fishing within the Commonwealth and certain matters relating thereto, including the subject of the ground water level within the Commonwealth”, c. 60, Resolves of 1956.

<sup>103</sup> [Ninety-second] Annual Report [of the] Massachusetts Division of Fisheries and Game [Boston], [July 1, 1956 to June 30] 1957, 28pp.

<sup>104</sup> Ripley, T.H. 1957. The bobwhite in Massachusetts. Massachusetts Division of Fisheries & Game [Boston], Research Bulletin No. 15, 20pp.

<sup>105</sup> MacConnell, W.P. 1958. Cover mapping Massachusetts from aerial photographs. Proceedings of the Society of American Foresters for 1957:159-162.

<sup>106</sup> “An Act requiring the wearing of red or yellow clothing or material while hunting during the open season for deer”, c. 40, St. 1957.

<sup>107</sup> “An Act authorizing the director of the Division of Fisheries and Game to extend the number of days for the hunting of ruffed grouse, quail or pheasant”, c. 105, St. 1957.

<sup>108</sup> “An Act allowing the taking of certain fish by means of a bow and arrow”, c. 116, St. 1957.

<sup>109</sup> “An Act authorizing the director of the Division of Fisheries and Game to acquire additional public shooting grounds and to regulate further the use of such grounds”, c. 320, St. 1957.

<sup>110</sup> “An Act authorizing the director of the Division of Fisheries and Game to issue licenses to allow the use of quail for the purpose of training dogs”, c. 350, St. 1957.

<sup>111</sup> [Ninety-third] Annual Report [of the] Massachusetts Division of Fisheries and Game [Boston], [July 1, 1957 to June 30] 1958, 33pp. The quotation is from page 2.

<sup>112</sup> A policy for the conservation of inland fisheries and game resources of Massachusetts. Adopted by the <Fisheries and Game> Board, October 22, 1957. 42pp.

<sup>113</sup> Mullan, J.W. 1958. The sea-run or “salter” brook trout fishery of the coastal streams of Cape Cod, Massachusetts. Massachusetts Division of Fisheries & Game, Research Bulletin No. 17, 25pp.

<sup>114</sup> “An Act prohibiting the hunting of certain wild and undomesticated birds”, c. 440, St. 1958.

<sup>115</sup> “Resolve providing for an investigation and study relative to the feasibility of establishing a fish hatchery in the area adjacent to Quabbin Reservoir”, c. 80, Resolves of 1958.

<sup>116</sup> [Ninety-fourth] Annual Report [of the] Massachusetts Division of Fisheries and Game [Boston], [July 1, 1958 to June 30] 1959, 31pp.

- <sup>117</sup> Mullan, J.W. and W.A. Tompkins. 1958. Trout pond management in Massachusetts. Massachusetts Division of Fisheries & Game [Boston], 132pp.
- <sup>118</sup> Larson, J.S. 1958. A study of posting on private land in Massachusetts. Thesis, University of Massachusetts, Amherst, 106pp.
- <sup>119</sup> "An Act relative to the hunting of raccoons or opossums", c. 41, St. 1959.
- <sup>120</sup> "An Act authorizing the possession of certain mammals without a permit", c. 243, St. 1959.
- <sup>121</sup> "An Act relative to the evidence required for the payment of a bounty for killing certain animals", c. 244, St. 1959
- <sup>122</sup> "An Act relative to the molesting, attacking or killing of deer by dogs in Berkshire County", c. 265, St. 1959.
- <sup>123</sup> "An Act increasing the fees for sporting, hunting, fishing and trapping licenses", c. 333, St. 1959.
- <sup>124</sup> "An Act relative to hunting and fishing rights of a person without a license on land owned or leased by him", c. 498, St. 1959.
- <sup>125</sup> "Resolve providing for a study by the Division of Fisheries and Game of wildlife habitat in the Quabbin watershed and in the fringe towns", c. 78, Resolves of 1959.
- <sup>126</sup> [Ninety-fifth] Annual Report [of the] Massachusetts Division of Fisheries and Game [Boston], [July 1, 1959 to June 30] 1960, 32pp.
- <sup>127</sup> Division of Fisheries and Game. [1959]. A study of wildlife habitat in the Quabbin watershed and fringe towns. Massachusetts Division of Fisheries & Game, 13pp. typescript.
- <sup>128</sup> Fay, F.H. 1951. Studies on the management, ecology and distribution of New England cottontails. Thesis, University of Massachusetts, Amherst, 101pp. The second study was: Chandler, E.H. 1952. The geographical and ecological distribution of Massachusetts cottontails. Thesis, University of Massachusetts, Amherst, 52pp.
- <sup>129</sup> Chaplin, R. 1960. The hunter safety color study. Massachusetts Wildlife 11(5):17.
- <sup>130</sup> Richards, O.W. 1961. Massachusetts hunter-safety color test. Journal of the American Optometric Association 32:205-209.
- <sup>131</sup> "An Act prohibiting the use of firearms or bow and arrows on the Greylock State Reservation from May first to October twentieth, inclusive", c. 100, St. 1960.
- <sup>132</sup> "An Act permitting the use of the color orange in clothing or material required while hunting during the deer season", c. 101, St. 1960.
- <sup>133</sup> "An Act repealing the provisions of law providing for a closed season on birds and mammals during certain periods", c. 146, St. 1960.
- <sup>134</sup> "An Act authorizing the trapping of beavers which have been declared a nuisance in certain areas", c. 363, St. 1960.
- <sup>135</sup> "An Act further regulating the issuance by the director of the Division of Fisheries and Game to aliens of hunting permits and permits to own or possess certain fire-



arms”, c. 419, St. 1960.

<sup>136</sup> “An Act requiring a person who hunts deer by certain means of bow and arrow during the exclusive archery season to obtain a certain stamp and to pay a fee therefor”, c. 425, St. 1960.

“The Control of Nature is a Phrase Conceived in Arrogance”: the 1960s.

<sup>1</sup> Grun, B. 1982. *The Timetables of History*. Touchstone Books, Simon & Schuster, New York, 676pp.

<sup>2</sup> Tager, J. and R.W. Wilkie. 1991. Postindustrial Commonwealth, 1950-1980s. Pages 46-55 in R.W. Wilkie and J. Tager (eds.) *Historical Atlas of Massachusetts*. University of Massachusetts Press, Amherst, Mass., 152pp.

<sup>3</sup> MacConnell, W.P. 1975. Remote sensing 20 years of change in Massachusetts, 1951-1971. University of Massachusetts, Amherst, Cooperative Extension Service Bulletin 630, 79pp.

<sup>4</sup> Anonymous. 1964. *Natural resources of Massachusetts*. U.S. Department of the Interior, Washington, D.C., 64pp.

<sup>5</sup> See 16 U.S.C. 670a-670o, 74 Stat. 1052, with amendments through 2004.

<sup>6</sup> Accessed from [http://www.fws.gov/habitatconservation/sikes\\_act.html](http://www.fws.gov/habitatconservation/sikes_act.html) on 21 February 2013.

<sup>7</sup> Endangered Species Preservation Act of 1966, P.L. 89-669, §§ 1-13, 80 Stat. 1926. Repealed in 1973.

<sup>8</sup> Bean, M.J. and M.J. Rowland. 1997. *The Evolution of National Wildlife Law* (3rd ed.) Praeger Publishers, Westport, Conn., 544pp. See pages 194-198.

<sup>9</sup> Endangered Species Conservation Act of 1969, P.L. 91-135, § 9(a), 83 Stat. 281. Repealed in 1981.

<sup>10</sup> Mosby, H.S. (ed.) 1960. *Manual of Game Investigational Techniques*. The Wildlife Society, Ann Arbor, Mich., chapters paged separately.

<sup>11</sup> Wight, H.M. 1939. *Field and Laboratory Technic* [sic] in *Wildlife Management*. University of Michigan Press, Ann Arbor, Mich., 107pp.

<sup>12</sup> Periodically revised and updated, the “Techniques Manual” reached its 7th edition (2 volumes) by 2012.

<sup>13</sup> Carson was not the first to condemn pesticides, but she was the first to draw together all the evidence in a cogent, publicly accessible source. See (e.g.): Yeager, L.E. 1956. Poisons and wildlife. *Wilson Bulletin* 68:261-264 for an earlier admonition.

<sup>14</sup> Carson, R. 1962. *Silent Spring*. Houghton-Mifflin Co., Boston, 368pp. The epigraph is from page 297.

<sup>15</sup> Anonymous. 1962. The desolate year. *Monsanto Magazine* 42(4):4-9.

<sup>16</sup> Udall, S.L. 1963. *The Quiet Crisis*. Holt, Rinehart & Winston, New York, 209pp.

- <sup>17</sup> Shelford, V.E. 1963. *The Ecology of North America*. University of Illinois Press, Urbana, Ill., 610pp.
- <sup>18</sup> Dasmann, R.F. 1964. *Wildlife Biology*. J. Wiley & Sons, Inc., New York, 231pp. [Second ed., 1981]
- <sup>19</sup> Schaller, G.B. 1963. *The Mountain Gorilla. Ecology and Behavior*. University of Chicago Press, Chicago, Ill., 431pp.
- <sup>20</sup> Errington, P.L. 1967. *Of Predation and Life*. Iowa State University Press, Ames, Ia., 277pp. The quotation is from page 239.
- <sup>21</sup> Poirot, E.M. 1964. *Our Margin of Life*. Vantage Press, New York, 159pp. The quotation is from page 123.
- <sup>22</sup> Carlander, K.D. 1969. *Handbook of Freshwater Fishery Biology* (3rd ed.) Iowa State University Press, Ames, Ia., 431pp. (v. 2, 1977; v. 3, 1997).
- <sup>23</sup> P.L. 87-126, 75 Stat. 284 “to establish the Cape Cod National Seashore”, 7 August 1961, now codified at 16 U.S.C. § 459b. The Seashore now occupies ≈68 mi<sup>2</sup> and 40 miles of seashore.
- <sup>24</sup> “An Act authorizing and directing the conveyance of certain lands to the United States of America”, c. 777, St. 1962.
- <sup>25</sup> [Ninety-sixth] Annual Report [of the] Massachusetts Division of Fisheries and Game [Boston], [July 1, 1960 to June 30] 1961, 35pp.
- <sup>26</sup> Mullan, J.W. 1961. *Trout stream management in Massachusetts*. Division of Fisheries & Game [Boston], 94pp.
- <sup>27</sup> McDonough, J.J. 1960. *The cottontail in Massachusetts*. Division of Fisheries & Game [Boston], 22pp.
- <sup>28</sup> “An Act relative to the marking of certain animals upon which a bounty for killing has been paid”, c. 308, St. 1961.
- <sup>29</sup> “An Act relative to the molesting, attacking and killing of deer by dogs in Franklin County”, c. 321, St. 1961.
- <sup>30</sup> “An Act authorizing the Commonwealth to grant easements over, across and upon certain land, for the transmission of electrical power, to New England Power Company”, c. 417, St. 1961.
- <sup>31</sup> “An Act granting the consent of the Commonwealth to the acquisition by the United States of certain areas in the Sudbury and Concord River Valleys for the purpose of the Migratory Bird Conservation Act and authorizing the division of fisheries and game and the commissioners of natural resources to acquire certain other lands in said areas”, c. 579, St. 1961.
- <sup>32</sup> “Resolve providing for an investigation and study by a special commission relative to authorizing the director of the division of fisheries and game to acquire certain lands”, c. 88, Resolves of 1961.
- <sup>33</sup> [Ninety-seventh] Annual Report [of the] Massachusetts Division of Fisheries and Game [Boston], [July 1, 1961 to June 30] 1962, 34pp. The quotation is from page 1.

- <sup>34</sup> Peterson, A.E., Jr. 1966. A study of introduced populations of cottontail rabbits in an insular environment. Paper presented at Northeast Wildlife Conference, Boston, Massachusetts. 5pp.
- <sup>35</sup> “An Act increasing the fine for the taking of wild turkeys”, c. 145, St. 1962.
- <sup>36</sup> “An Act requiring the wearing of a daylight fluorescent red or orange color clothing or material while hunting during the deer season”, c. 171, St. 1962.
- <sup>37</sup> “An Act permitting hunting on legal holidays”, c. 438, St. 1962.
- <sup>38</sup> “An Act authorizing the director of the Division of Fisheries and Game to acquire certain lands in the town of Petersham,”, c. 441, St. 1962.
- <sup>39</sup> “An Act authorizing the director of the Division of Fisheries and Game to acquire certain lands in the town of Peru”, c. 451, St. 1962.
- <sup>40</sup> “An Act authorizing the director of the Division of Fisheries and Game to issue permits for commercial shooting preserves”, c. 620, St. 1962.
- <sup>41</sup> “An Act relative to the promotion and development of marine fisheries within the Commonwealth”, c. 715, St. 1962.
- <sup>42</sup> “An Act authorizing the Commonwealth to grant easements over, under, across and upon certain land, for the transmission of electric power, to Western Massachusetts Power Company”, c. 731, St. 1962.
- <sup>43</sup> “Resolve providing for an investigation and study by the division of fisheries and game relative to the feasibility of issuing free certificates or licenses to fish, hunt or trap to certain persons”, c. 66, Resolves of 1962.
- <sup>44</sup> [Ninety-eighth] Annual Report [of the] Massachusetts Division of Fisheries and Game [Boston], [July 1, 1962 to June 30] 1963, 34pp.
- <sup>45</sup> Sargent was later Governor of Massachusetts from 1971-75.
- <sup>46</sup> “An Act relative to the possession of certain firearms in motor boats”, c. 107, St. 1963.
- <sup>47</sup> “An Act relative to the molesting, attacking or killing of deer by dogs in Hampshire County and the towns of Hardwick, Barre, Petersham and Athol in Worcester County”, c. 102, St. 1963.
- <sup>48</sup> “An Act relative to the placing of poison for the purpose of killing certain birds and mammals”, c. 346, St. 1963.
- <sup>49</sup> “An Act providing that permits issued by the director of the Division of Fisheries and Game for commercial shooting preserves shall expire annually”, c. 381, St. 1963.
- <sup>50</sup> “An Act directing the director of the Division of Fisheries and Game to prepare plans and specifications for a fish hatchery at the Quabbin Reservoir”, c. 509, St. 1963.
- <sup>51</sup> [Ninety-ninth] Annual Report [of the] Massachusetts Division of Fisheries and Game [Boston], [July 1, 1963 to June 30] 1964, 39pp.
- <sup>52</sup> “An Act authorizing the director of the Division of Fisheries and Game to sell and convey certain property in the Town of Marshfield”, c. 445, St. 1964.

- <sup>53</sup> Pollack, B. and G. Pushee. 1964. The pheasant in Massachusetts. Massachusetts Division of Fisheries and Game [Boston], 16pp.
- <sup>54</sup> “An Act prohibiting the altering of any license or permit issued by the Division of Fisheries and Game”, c. 145, St. 1964.
- <sup>55</sup> “An Act relative to the taking of shad”, c. 156, St. 1964.
- <sup>56</sup> “An Act permitting the Division of Fisheries and Game to issue permits for the trapping of certain birds”, c. 390, St. 1964.
- <sup>57</sup> “An Act authorizing agents of the Division of Fisheries and Game of the Department of Natural Resources to remedy certain conditions caused by beavers”, c. 527, St. 1964.
- <sup>58</sup> “Resolve providing for an investigation and study by a special commission relative to the inland conservation laws”, c. 48, Resolves of 1964.
- <sup>59</sup> “Resolve providing for an investigation and study by the Department of Natural Resources, the Division of Fisheries and Game, and the Metropolitan District Commission relative to the hunting of deer and to the poisoning of feeder streams of the Quabbin Reservoir”, c. 62, Resolves of 1964.
- <sup>60</sup> [One-hundredth] Annual Report [of the] Massachusetts Division of Fisheries and Game [Boston], [July 1, 1964 to June 30] 1965, 37pp.
- <sup>61</sup> Chaplin, B. 1964. Fish and Game Division—a unique state agency. Massachusetts Wildlife 15:12-17. The first in a series of 4 articles (1964-65) on the agency’s history.
- <sup>62</sup> “An Act further regulating fishing by means of a bow and arrow”, c. 76, St. 1965.
- <sup>63</sup> “An Act authorizing the Commonwealth to grant easements over, across and upon certain land in the towns of Groveland and Georgetown, for the transmission of electrical power, to Massachusetts Electric Company”, c. 435, St. 1965.
- <sup>64</sup> “An Act providing that permits for commercial shooting preserves may be issued in all counties of the Commonwealth”, c. 466, St. 1965.
- <sup>65</sup> “Resolve further reviving and continuing the special commission established to make an investigation and study relative to the inland conservation laws”, c. 70, Resolves of 1965.
- <sup>66</sup> [One Hundred and First] Annual Report [of the] Massachusetts Division of Fisheries and Game [Boston], [July 1, 1965 to June 30] 1966, 30pp.
- <sup>67</sup> Grice, D. and J.P. Rogers. 1965. The wood duck in Massachusetts. Massachusetts Division of Fisheries and Game [Boston], 96pp.
- <sup>68</sup> “An Act providing for the protection of the coastal wetlands of the Commonwealth”, c. 768, St. 1965.
- <sup>69</sup> “An Act increasing the fees for sporting, hunting, fishing, and trapping licenses”, c. 801, St. 1965.
- <sup>70</sup> “An Act extending the time within which firearms and bows and arrows may be used within the Greylock Reservation”, c. 264, St. 1966.

- <sup>71</sup> “An Act authorizing the Division of Fisheries and Game to acquire certain land in the towns of Ware and Belchertown for fish and wildlife management purposes”, c. 429, St. 1966.
- <sup>72</sup> “An Act authorizing the Division of Fisheries and Game to acquire certain land in the towns of Ware and Belchertown for fish and wildlife management purposes”, c. 493, St. 1966.
- <sup>73</sup> “An Act to provide for a special inland fisheries and game capital outlay program”, c. 651, St. 1966.
- <sup>74</sup> “Resolve providing for an investigation and study by the Department of Natural Resources of the inland wetlands in the Commonwealth”, c. 89, Resolves of 1966.
- <sup>75</sup> [One Hundred and Second] Annual Report [of the] Massachusetts Division of Fisheries and Game [Boston], [July 1, 1966 to June 30] 1967, 13pp.
- <sup>76</sup> Wentworth, B.C., E.M. Pollack, and J.R. Smyth, Jr. 1967. Sexing day-old pheasants by sex-linked down color. *Journal of Wildlife Management* 31:741-745.
- <sup>77</sup> “An Act designating the fish hatchery on the Swift River in the town of Belchertown as the Charles L. McLaughlin Fish Hatchery”, c. 205, St. 1967.
- <sup>78</sup> “An Act authorizing the director of the Division of Fisheries and Game to apply for and receive certain federal grants and to construct and equip a fish hatchery complex”, c. 243, St. 1967.
- <sup>79</sup> “An Act authorizing the director of the Division of Fisheries and Game to acquire certain lands for fish and wildlife purposes without the consent of certain elected officers of a city or town wherein such lands lie”, c. 262, St. 1967.
- <sup>80</sup> “An Act authorizing the director of fisheries and game to designate certain persons to issue sporting, hunting, fishing or trapping licenses”, c. 544, St. 1967.
- <sup>81</sup> [One Hundred and Third] Annual Report [of the] Massachusetts Division of Fisheries and Game [Boston], [July 1, 1967 to June 30] 1968, 13pp.
- <sup>82</sup> Bridges, C.H. and P.E. Sendak. 1967. Fish and wildlife \$110,000,000 a year in Massachusetts. Massachusetts Division of Fisheries and Game [Boston], 10pp.
- <sup>83</sup> “An Act revising the laws relating to inland fisheries and game and other natural resources”, c. 802, St. 1967.
- <sup>84</sup> The revisions repealed the previous provisions of law which restricted the setting of leghold traps and reinstituted their use in land sets as authorized by the Director in rules and regulations relating to trapping. The revisions also clarified and expanded the authority of persons to protect their property from wildlife damage (131,37).
- <sup>85</sup> The revisions also repealed the existing bounty on “wildcats” (i.e., bobcat). This action terminated the last state bounty on terrestrial mammals. However, some municipalities paid bounties on woodchucks and foxes at least until 1970 (e.g., Annual Reports of the Town of Falmouth for 1970, page 252).
- <sup>86</sup> Cowardin, L.M. 1961. The wild turkey in Massachusetts: an experiment in restoration. Thesis, University of Massachusetts, Amherst, 174pp.; Ellison, L.N. 1963. Evaluation of the wild turkey restoration experiment in Massachusetts. Thesis, Uni-



versity of Massachusetts, Amherst, 139pp; Colby, D.R. 1965. Populations and habitat of the wild turkey in western Massachusetts. Thesis, University of Massachusetts, Amherst, 152pp.; and Pierce, D.A. 1967. Re-establishment of the wild turkey in Massachusetts: population and habitat studies. Thesis, University of Massachusetts, Amherst, 183pp.

<sup>87</sup> Sheldon, W.G. 1967. The Book of the American Woodcock. University of Massachusetts Press, Amherst, Mass., 227pp.

<sup>88</sup> "An Act authorizing the carrying of firearms on Sundays for the purpose of sport target shooting", c. 214, St. 1968.

<sup>89</sup> "An Act protecting the inland wetlands of the Commonwealth", c. 444, St. 1968.

<sup>90</sup> "An Act providing for the issuance of fishing licenses to certain mentally retarded persons without payment of fees", c. 530, St. 1968.

<sup>91</sup> "An Act authorizing the director of the Division of Fisheries and Game to issue special certificates allowing certain groups of mentally retarded persons to fish without payment of a fee", c. 550, St. 1968.

<sup>92</sup> "An Act providing for the sale of the Sutton fish hatchery by the Division of Fisheries and Game", c. 534, St. 1968. Sold to the Town of Sutton on March 10, 1970.

<sup>93</sup> "An Act temporarily authorizing the issuance to residents of the Commonwealth while in the active military or naval service of the United States of special certificates without fee entitling them to hunt and fish", c. 554, St. 1968.

<sup>94</sup> "An Act to provide for an inland fisheries and game land and water acquisition and development program", c. 639, St. 1968.

<sup>95</sup> "An Act authorizing the director of the Division of Fisheries and Game to prohibit the possession or use of certain rifles in certain areas during the period between October first and April first", c. 718, St. 1968.

<sup>96</sup> [One Hundred and Fifth; sic, it was actually the 104th] Annual Report [of the] Massachusetts Division of Fisheries and Game [Boston], [July 1, 1968 to June 30] 1969, 14pp.

<sup>97</sup> Wetherbee, D.K., R.P. Coppinger, and R.E. Walsh. 1972. Time Lapse Ecology, Muskeget Island, Nantucket, Massachusetts. MSS Information Corporation, New York, 173pp.

<sup>98</sup> Larson, J.S. and S.J. Knapp. 1971. Sexual dimorphism in beaver neutrophils. *Journal of Mammalogy* 52:212-215.

<sup>99</sup> Heusmann, H.W. 1969. An analysis of the potential creation of productive wetlands by interstate highway construction with emphasis on waterfowl management. Thesis, University of Massachusetts, Amherst, Mass., 97pp.

<sup>100</sup> "An Act further regulating the wearing of hunting clothes during the open deer season", c. 157, St. 1969.

<sup>101</sup> "An Act authorizing the Division of Fisheries and Game to acquire land and construct a fishing pier at Cook Pond in the city of Fall River", c. 542, St. 1969.

<sup>102</sup> “An Act authorizing the director of fisheries and game to undertake a program of management to provide sport fishing at Cook Pond in the city of Fall River”, c. 566, St. 1969.

<sup>103</sup> “An Act exempting paraplegics from payment of a fee for a hunting license”, c. 652, St. 1969.

<sup>104</sup> [One Hundred and Fifth] Annual Report [of the] Massachusetts Division of Fisheries and Game [Boston], [July 1, 1969 to June 30] 1970, 33pp.

<sup>105</sup> “An Act providing for the transfer of certain land and buildings in the town of Westborough from the Department of Mental Health to the Division of Fisheries and Game”, c. 501, St. 1970.

<sup>106</sup> Hoar, A.R. 1990. Partial chronology of events associated with fish passage on the mainstem Connecticut River. U.S. Fish & Wildlife Service, Newton Corner, Mass., [10] pp., unpublished document.

<sup>107</sup> Cardoza, J.E. 1976. The history and status of the black bear in Massachusetts and adjacent New England states. Division of Fisheries & Wildlife, Westborough, Mass., Research Bulletin 18, 113pp.

<sup>108</sup> “An Act providing that action required for the protection of certain fisheries in inland waters be assigned to the director of the Division of Water Pollution Control”, c. 136, St. 1970.

<sup>109</sup> “An Act further regulating the wearing of hunting clothing during the deer season”, c. 167, St. 1970. This law changed the requirement to 500 in<sup>2</sup> and provided for the Director to define “hunter orange”. See the Code of Massachusetts Regulations, 321 CMR 3.01(2).

<sup>110</sup> “An Act permitting fishing in Silver Lake in the towns of Pembroke, Halifax, Kingston and Plympton”, c. 579, St. 1970. This is a special law, not an amendment to a general law.

<sup>111</sup> “An Act relative to the injury and killing of fish and fish spawn in the inland waters of the Commonwealth and requiring remuneration for fish so injured or killed”, c. 612, St. 1970.

<sup>112</sup> “An Act providing aid to paraplegics while hunting”, c. 732, St. 1970.

#### “A National Teach-In on the Crisis of the Environment”: the 1970s.

<sup>1</sup> Remarks of Senator Gaylord Anton Nelson (1916-2005) proposing the concept of “Earth Day”, *Congressional Record*, v. 115, no. 164, October 8, 1969.

<sup>2</sup> Grun, B. 1982. *The Timetables of History*. Touchstone Books, Simon & Schuster, New York, 676pp.

<sup>3</sup> National Environmental Policy Act of 1969, P.L. 91-190, 83 Stat. 852, codified at 42 U.S.C. § 4321 *et seq.* Accessed from [http://en.wikipedia.org/wiki/National\\_Environmental\\_Policy\\_Act](http://en.wikipedia.org/wiki/National_Environmental_Policy_Act) on 1 March 2013.

- <sup>4</sup> Clean Air Act of 1970, P.L. 88-206, 77 Stat. 382, codified at 42 U.S.C. 7401 *et seq.* Extension in 1970 and amendments in 1977 and 1990. Accessed from [\*\*http://en.wikipedia.org/wiki/Clean\\_Air\\_Act\(UnitedStates\)\*\*](http://en.wikipedia.org/wiki/Clean_Air_Act(UnitedStates)) on 1 March 2013.
- <sup>5</sup> Federal Water Pollution Control Amendments of 1972 (“Clean Water Act”), P.L. 92-500, 86 Stat. 816, codified at 33 U.S.C. § 1251 *et seq.* Accessed from [\*\*http://en.wikipedia.org/wiki/Clean\\_Water\\_Act\*\*](http://en.wikipedia.org/wiki/Clean_Water_Act) on 1 March 2013.
- <sup>6</sup> Bean, M.J. and M.J. Rowland. 1997. *The Evolution of National Wildlife Law* (3rd ed.) Praeger Publishers, Westport, Conn., 544pp. See pages 109-147.
- <sup>7</sup> Marine Mammal Protection Act of 1972, P.L. 92-522, 86 Stat. 0127, codified at 16 U.S.C. §§ 1361-1421h.
- <sup>8</sup> Joint Resolution asking the President of the United States to declare the fourth Saturday of September 1972 “National Hunting and Fishing Day”. Senate Joint Resolution 117, 92nd Congr., 2 Sess., 86 Stat. 133.
- <sup>9</sup> “An Act to provide for the conservation of endangered and threatened species of wild-life and plants, and for other purposes”. P.L. 93-205, 87 Stat. 884, codified at 7 U.S.C. § 136 and 16 U.S.C. §§ 1531 *et seq.*, as amended in 1978, 1979, and 1983.
- <sup>10</sup> Convention on International Trade in Endangered Species of Flora and Fauna, signed at Washington D.C. on March 3, 1973, and amended at Bonn, Germany, on June 22, 1979. See also [\*\*http://www.cites.org\*\*](http://www.cites.org) accessed on 1 March 2013.
- <sup>11</sup> *Kleppe v. New Mexico*, 426 U.S. 529 (1976).
- <sup>12</sup> *Baldwin v. Fish and Game Commission of Montana*, 436 U.S. 371 (1978).
- <sup>13</sup> Allen, J.A. 1869. Catalogue of the mammals of Massachusetts; with a critical review of the species (Cetacea). *Bulletin of the Museum of Comparative Zoology* 1(8):143-252.
- <sup>14</sup> Cardoza, J.E. 1986. A preliminary assessment of the status of fisher and river otter in Massachusetts. Appended to: Report of Massachusetts Federal Aid in Wildlife Restoration Project W-35-R-28, Job I-6, [18]+[71]pp.
- <sup>15</sup> Fisher continued to expand their range in Massachusetts and by 2012 were well-distributed statewide except the island counties of Dukes and Nantucket.
- <sup>16</sup> Turner, J. 1980. *Reckoning with the Beast. Animals, Pain, and Humanity in the Victorian Mind.* Johns Hopkins University Press, Baltimore, Md., 190pp.
- <sup>17</sup> Gentile, J.R. 1987. The evolution of anti-trapping sentiment in the United States: a review and commentary. *Wildlife Society Bulletin* 15:490-503.
- <sup>18</sup> Peterle, T.J. 1977. Hunters, hunting, anti-hunting. *Wildlife Society Bulletin* 5:151-161.
- <sup>19</sup> Singer, P. 1990. *Animal Liberation* (2nd ed.) New York Review of Books, New York, 320pp.
- <sup>20</sup> Schweitzer, A. 1933. *Out of My Life and Thought.* Henry Holt & Co., New York, 288pp. See page 185.
- <sup>21</sup> Brabazon, J. 2000. *Albert Schweitzer: a Biography* (2nd ed.) Syracuse University Press, Syracuse, N.Y., 555pp.

- <sup>22</sup> Ortega y Gasset, J. 1972. *Meditations on Hunting*. Charles Scribner's Sons, New York, 152pp. The quotation is from page 112.
- <sup>23</sup> Shepard, P. 1996. *The Others*. How animals made us human. Island Press, Washington, D.C., 374pp. The quotation is from page 9.
- <sup>24</sup> The Wildlife Society did not include public relations in its "Techniques Manual" until 1980 (and then only briefly). See: Shay, R.E. 1980. Gaining public acceptance of wildlife management. Pages 495-498 in Schemnitz, S.D. (ed.) *Wildlife Management Techniques Manual* (4th ed.) The Wildlife Society, Washington, D.C., 686pp.
- <sup>25</sup> Gilbert, D.L. 1971. *Natural Resources and Public Relations*. The Wildlife Society, Washington, D.C., 320pp. A rewriting of Gilbert's earlier college text. The quotation is from page 1.
- <sup>26</sup> Horwitz, E.C.J. (ed.) 1977. *The Ways of Wildlife*. Citation Press/Scholastic, New York, 157pp.
- <sup>27</sup> Bailey, J.A., W. Elder and T.D. McKinney (eds.) 1974. *Readings in Wildlife Conservation*. The Wildlife Society, Washington, D.C., 722pp.
- <sup>28</sup> Some later key papers "that have advanced the wildlife profession" were referenced by: Leopold, B.D. and P.R. Krausman. 2012. Science in print: the lifeblood of the Society. *The Wildlife Professional* 6(3):48-53.
- <sup>29</sup> O'Roke, E.C. 1948. Diseases and parasites of wild animals. Pages 309-384 in R.E. Trippensee. *Wildlife Management: upland game and general principles*. v. 1. McGraw Hill Book Co., New York, 479pp. The quotation is from page 369.
- <sup>30</sup> Davis, J.W., L.H. Karstad, and D.O. Trainer (eds.) 1970. *Infectious Diseases of Wild Mammals*. Iowa State University Press, Ames, Ia., 421pp. The most recent [3rd] edition is by Williams and Barker, 2001.
- <sup>31</sup> Davis, J.W. and R.C. Anderson (eds.) 1971. *Parasitic Diseases of Wild Mammals*. Iowa State University Press, Ames, Ia., 364pp. The most recent [2nd] edition is by Samuel et al., 2001.
- <sup>32</sup> Davis, J.W., R.C. Anderson, L. Karstad, and D.O. Trainer (eds.) 1971. *Infectious and Parasitic Diseases of Wild Birds*. Iowa State University Press, Ames, Ia., 344pp. The quotation is from page ix. The most recent editions are by Atkinson et al., 2007 (parasitic) and Thomas et al., 2007 (infectious).
- <sup>33</sup> Trefethen, J.B. 1975. *An American Crusade for Wildlife*. Winchester Press and Boone and Crockett Club, New York, 409pp.
- <sup>34</sup> Another conservation history appearing at the same time (Reiger, G.F. 1975. *American Sportsmen and the Origins of Conservation*. Winchester Press, New York, 316pp.) has been criticized for its near-sole focus on the role of sportsmen. See (e.g.) Banks, R.C. 1976. [Review of] *American sportsmen and the origins of conservation*. *Auk* 93:864-865.
- <sup>35</sup> Caughley, G. 1977. *Analysis of Vertebrate Populations*. J. Wiley & Sons, New York, 234pp.
- <sup>36</sup> [One Hundred and Sixth] Annual Report [of the] Massachusetts Division of Fisheries and Game [Boston], [July 1, 1970 to June 30] 1971, 25pp.

- <sup>37</sup> The use of rotenone has been challenged as to its effects on aquatic communities and human health. Standards are now in place regarding its application in fisheries management. See: Finlayson, B., R. Schnick, D. Skaar, J. Anderson, L. Demay, D. Duffield, W. Horton, and J. Steinkjer. 2010. Planning and standard operating procedures for the use of rotenone in fish management. American Fisheries Society, Bethesda, Md., 128pp.
- <sup>38</sup> Haines, T.A. and R.E. Johnson (eds.) 1982. Acid Rain/Fisheries. Proceedings of an international symposium on acidic precipitation and fishery impacts in northeastern North America. American Fisheries Society, Bethesda, Md., 357pp.
- <sup>39</sup> "An Act authorizing trapping by certain minors when accompanied by an adult", c. 60, St. 1971.
- <sup>40</sup> "An Act relative to regulating boating on great ponds", c. 498, St. 1971.
- <sup>41</sup> [One Hundred and Seventh] Annual Report [of the] Massachusetts Division of Fisheries and Game [Boston], [July 1, 1971 to June 30] 1972, 21pp.
- <sup>42</sup> Hoar, A.R. 1990. Partial chronology of events associated with fish passage on the mainstem Connecticut River. U.S. Fish & Wildlife Service, Newton Corner, Mass., [10] pp., unpublished document.
- <sup>43</sup> "An Act providing for the protection of endangered species of wild animals", c. 876, St. 1971.
- <sup>44</sup> "An Act protecting the gray wolf, giant otter, and all South American otters of the genus *Lutra*", c. 126, St. 1972.
- <sup>45</sup> "An Act further regulating the transfer of protected species of fish, birds and mammals and exempting certain zoos from the law prohibiting the sale, possession or importation of such species", c. 125, St. 1972.
- <sup>46</sup> "An Act authorizing shooting on commercial shooting preserves on certain Sundays", c. 135, St. 1972.
- <sup>47</sup> "An Act further regulating the procedure for importing inland fish and wildlife into the Commonwealth", c. 223, St. 1972.
- <sup>48</sup> "An Act further regulating the discharge of firearms within a certain distance from buildings", c. 261, St. 1972.
- <sup>49</sup> "An Act designating the Montague State Fish Hatchery in the Town of Montague as the Bitzer State Fish Hatchery", c. 322, St. 1972. Named in honor of fish culturists Harold M. Bitzer (1903-1984) with 50 years of service and Ralph Raymond Bitzer (1901-1990), with 55 years of service.
- <sup>50</sup> "An Act providing for an annual deer hunt for paraplegics", c. 422, St. 1972.
- <sup>51</sup> "An Act relative to hunting certain birds of prey", c. 445, St. 1972.
- <sup>52</sup> [One Hundred and Eighth] Annual Report [of the] Massachusetts Division of Fisheries and Game [Boston], [July 1, 1972 to June 30] 1973, 18pp. The quotation is from the inside front cover.
- <sup>53</sup> "An Act further protecting the inland wetlands and flood plains of the Commonwealth", c. 782, St. 1972.



<sup>54</sup> “An Act relative to the protection of wetlands”, c. 784, St. 1972. See G.L. c. 131, §§ 40 and 40A, and 310 CMR 10.00.

<sup>55</sup> For an evaluation of the Massachusetts wetlands protection act (through 1988) and its associated regulations, see: Griffin, C.R. 1989. Protection of wildlife habitat by state wetland regulations: the Massachusetts initiative. Transactions of the North American Wildlife and Natural Resources Conference 54:22-31.

<sup>56</sup> Blandin, W.W. and H.W. Heusmann. 1974. Establishment of Canada goose populations through urban gosling transplants. Transactions of the Northeast Wildlife Conference 31:83-100.

<sup>57</sup> Heusmann, H.W., W.W. Blandin, and R.E. Turner. 1977. Starling-deterrent nesting cylinders in wood duck management. Wildlife Society Bulletin 5:14-18.

<sup>58</sup> “An Act further regulating the licensing of propagators and dealers of certain birds and mammals and increasing the license fees therefor”, c. 573, St. 1972.

<sup>59</sup> “An Act transferring certain land in the Town of Westborough from the Department of Mental Health and the Trustees of the Westborough State Hospital to the Division of Fisheries and Game”, c. 580, St. 1972.

<sup>60</sup> “An Act further regulating licensing programs and fees relative to fish, birds and mammals”, c. 706, St. 1972.

<sup>61</sup> “An Act further regulating trapping by minors and the issuance of minor’s certificates of competency in the safe handling of firearms”, c. 156, St. 1973.

<sup>62</sup> [One Hundred Ninth and One Hundred Tenth] Annual Reports [of the] Massachusetts Division of Fisheries and Game [Boston], [July 1 to June 30] 1974 and 1975, 35pp.

<sup>63</sup> Since this was a 2-year combined Annual Report, I have separated the accomplishments and activities into annual segments, where possible.

<sup>64</sup> Report of the Attorney General for 1974, Public Document No. 12, pages 45-46, Opinion No. 2 regarding applications for an antlerless deer permit, July 17, 1973.

<sup>65</sup> Cardoza, J.E. 2009. The wild turkey in Massachusetts. Massachusetts Division of Fisheries & Wildlife, Westborough, Mass., Research Bulletin 20, 172pp.

<sup>66</sup> “An Act relative to the use of certain raptors for hunting purposes”, c. 496, St. 1973.

<sup>67</sup> “An Act authorizing the State Treasurer to receive funds from the director of the Division of Fisheries and Game”, c. 879, St. 1973.

<sup>68</sup> “An Act requiring persons owning certain animals to be licensed by the Department of Natural Resources”, c. 1071, St. 1973. The “exemption list” is promulgated at 321 CMR 9.01

<sup>69</sup> “An Act providing for a Massachusetts waterfowl stamp”, c. 420, St. 1974.

<sup>70</sup> “Resolve providing for an investigation and study by the Division of Fisheries and Game relative to certain hunting, fishing and wildlife matters”, c. 129, Resolves of 1973.

<sup>71</sup> “An Act establishing an Executive Office of Environmental Affairs”, c. 806, St. 1974.

<sup>72</sup> See c. 806 §§ 26-27, 29, 31, St. 1974.

<sup>73</sup> See: McCord, C.M. 1974a. Courtship behavior in free-ranging bobcats. *World's Cats* 2:76-89, and, 1974b. Selection of winter habitat by bobcats (*Lynx rufus*) on the Quabbin Reservation, Massachusetts. *Journal of Mammalogy* 55:428-437.

<sup>74</sup> "An Act proving for the quarantine of certain diseased fish, birds, mammals, reptiles and amphibians", c. 667, St. 1974.

<sup>75</sup> "An Act prohibiting the use of certain traps or other devices for the capture of fur-bearing mammals", c. 796, St. 1974.

<sup>76</sup> "An Act further regulating the protection of wetlands", c. 818, St. 1974.

<sup>77</sup> "An Act relative to the penalty for the unlawful possession of a deer", c. 30, St. 1975.

<sup>78</sup> "An Act redefining the term "loaded shotgun or rifle" in the law relative to inland fisheries and game", c. 162, St. 1975.

<sup>79</sup> "An Act further regulating the issuance of minor's certificate of competency in the safe handling of firearms", c. 217, St. 1975.

<sup>80</sup> [One Hundred Eleventh and One Hundred Twelfth] Annual Reports [of the] Massachusetts Division of Fisheries and Game [Boston], [July 1 to June 30] 1976 and 1977, 55pp.

<sup>81</sup> Since this was a 2-year combined Annual Report, I have separated the accomplishments and activities into annual segments, where possible.

<sup>82</sup> Phenicie, C.K. and J.R. Lyons. 1973. Tactical planning in fish and wildlife management and research. U.S. Bureau of Sport Fisheries & Wildlife, Washington, D.C., Resource Publication No. 123, 19pp.

<sup>83</sup> Mugford, P.S. 1976. An inventory of Massachusetts fish and wildlife (vertebrate) resources. Massachusetts Division of Fisheries & Wildlife, Boston, 70pp. The document also includes a list of "declining" species in 6 categories.

<sup>84</sup> "An Act relative to the appraisal of damages caused by deer", c. 498, St. 1975.

<sup>85</sup> "An Act providing for the reimbursement of certain farmers for damage caused by deer or moose", c. 115, St. 1976.

<sup>86</sup> "An Act relative to the Executive Office of Environmental Affairs", c. 706, St. 1975.

<sup>87</sup> "An Act allowing certain non-residents of the Commonwealth to be issued complimentary hunting and fishing licenses", c. 178, St. 1976.

<sup>88</sup> Grose, P.L. and J.S. Mattson (eds.) 1977. The Argo Merchant oil spill: a preliminary scientific report. U.S. Department of Commerce, National Oceanic and Atmospheric Administration, Washington, D.C., variously paged.

<sup>89</sup> Hoar, A.R. 1990. Partial chronology of events associated with fish passage on the mainstem Connecticut River. U.S. Fish & Wildlife Service, Newton Corner, Mass., [10] pp., unpublished document.

<sup>90</sup> "An Act relative to the payment of fees for antlerless deer permits", c. 381, St. 1976.

<sup>91</sup> “An Act further regulating license requirements for falconers and the sport of falconry”, c. 542, St. 1977.

<sup>92</sup> “An Act prohibiting the use of certain animals as lures or bait”, c. 679, St. 1977.

<sup>93</sup> “An Act further regulating field trials under the control of the Division of Fisheries and Wildlife”, c. 921, St. 1977.

<sup>94</sup> “An Act relative to the commercial harvest of eels in the waters of the Commonwealth”, c. 971, St. 1977.

<sup>95</sup> “An Act reducing the fee for hunting and fishing licenses for certain persons over sixty-five years of age”, c. 983, St. 1977.

<sup>96</sup> [One Hundred and Thirteenth] Annual Report [of the] Massachusetts Division of Fisheries and Wildlife [Boston], [July 1, 1977 to June 30] 1978, 53pp.

<sup>97</sup> Heusmann, H W 1983. Are the Canada geese a threat to shellfish? Cape Naturalist 12:4648.

<sup>98</sup> Schultz, W.C. 1978. Acclimation of stocked New Brunswick hare in Massachusetts. Thesis, University of Massachusetts, Amherst, 65pp.

<sup>99</sup> Harding, J. 1978. An animal damage identification guide for urban, suburban, and agricultural areas in Massachusetts. Thesis, University of Massachusetts, Amherst, 157pp.

<sup>100</sup> “An Act further regulating the issuance of sporting, hunting, fishing and trapping licenses”, c. 113, St. 1978.

<sup>101</sup> “An Act relative to the loss of licenses for certain fish and game violations”, c. 276, St. 1978.

<sup>102</sup> “An Act providing for the noncriminal disposition of certain fish and game and marine fishery violations”, c. 387, St. 1978.

<sup>103</sup> [One Hundred and Fourteenth] Annual Report [of the] Massachusetts Division of Fisheries and Wildlife [Boston], [July 1, 1978 to June 30] 1979, 54pp.

<sup>104</sup> Hodgdon, H.E. 1978. Social dynamics and behavior within an unexploited beaver (*Castor canadensis*) population. Dissertation, University of Massachusetts, Amherst, 292pp.

<sup>105</sup> “An Act relative to permits issued for certain aquacultural purposes”, c. 473, St. 1978.

<sup>106</sup> “An Act transferring control of certain land at Gardner State Hospital to the Executive Office of Environmental Affairs”, c. 505, St. 1978.

<sup>107</sup> [One Hundred Fifteenth and One Hundred Sixteenth] Annual Reports [of the] Massachusetts Division of Fisheries and Wildlife [Boston], [July 1 to June 30] 1980 and 1981, 62pp. The quotation is from page 4.

<sup>108</sup> Since this was a 2-year combined Annual Report, I have separated the accomplishments and activities into annual segments, where possible.

<sup>109</sup> McCord, C.M. 1981a. Controversy. Massachusetts Wildlife 32(1):10-11.

- <sup>110</sup> McCord, C.M. 1981b. Bobcat update. *Massachusetts Wildlife* 32(3):14-17.
- <sup>111</sup> Lancia, R.A. 1979. Year-long activity patterns of radio-marked beaver (*Castor canadensis*). Dissertation, University of Massachusetts, Amherst, 146pp.
- <sup>112</sup> Cooperative agreement between the United States Fish and Wildlife Service and the Massachusetts Division of Fisheries and Wildlife for the management of endangered species, 6pp. <signed> William Ashe, Regional Director, USFWS, 31 August 1979 [and] Richard Cronin, Director, MDFW, 21 August 1979. Later amended.
- <sup>113</sup> “An Act relative to the hunting of wild turkeys”, c. 404, St. 1979.
- <sup>114</sup> “An Act relative to reptiles and amphibians”, c. 614, St. 1979.
- <sup>115</sup> “An Act providing for the listing of endangered wildlife and wild plant species”, c. 726, St. 1979.
- <sup>116</sup> “An Act amending license fees for hunting, fishing, and trapping”, c. 767, St. 1979.
- <sup>117</sup> “An Act relative to registration and identification of traps”, c. 84, St. 1980.
- <sup>118</sup> “An Act further regulating rules and regulations relative to great ponds”, c. 154, St. 1980.
- <sup>119</sup> “An Act regulating access to the Massachusetts Natural Heritage data base”, c. 328. St. 1980.

“The Division [has] a Clear Mandate to Operate a Nongame Program”: the 1980s:

- <sup>1</sup> For one historical perspective, see: Adams, W.C. 1931. Wild life administration and the fish and game commissioner. *Auk* 48:42-51.
- <sup>2</sup> For an early usage of the word, see: Anonymous. 1887. Fourth meeting of the American Ornithologists’ Union. *Auk* 4:56-61. “...Committee for the Protection of North American Birds...has drafted what it seems a suitable law for the protection of song and nongame birds”. [page 58]
- <sup>3</sup> Accessed from <http://en.wikipedia.org/wiki/1980s>, on 7 March 2013.
- <sup>4</sup> Tager, J., R.W. Wilkie and L.W. Owens. 1991. Metropolitan Commonwealth, 1900-1950. Pages 38-45 in R.W. Wilkie and J. Tager (eds.) *Historical Atlas of Massachusetts*. University of Massachusetts Press, Amherst, Mass., 152pp.
- <sup>5</sup> Fish and Wildlife Conservation Act (“Nongame Act”), P.L. 96-366, approved September 29, 1980, codified at 16 U.S.C. 2901-2911, 94 Stat. 1322.
- <sup>6</sup> Federal Aid in Sport Fish Restoration Act, P.L. 98-369, approved July 18, 1984, codified at 26 U.S.C. 9504, 98 Stat. 1012. Amended several times.
- <sup>7</sup> Accessed from <http://www.fws.gov/birdhabitat/NAWMP/index.shtm> on 8 March 2013.
- <sup>8</sup> Soulé, M. 1987. History of the Society for Conservation Biology. *Conservation Biology* 1:4-5.

- <sup>9</sup> The phrase appears in the first sentence of the first paper in the first issue of the *Journal of Wildlife Management*: “In the new and growing field of conservation biology...”. See: Errington, P.L. and F.N. Hamerstrom, Jr. 1937. The evaluation of nesting losses and juvenile mortality of the ring-necked pheasant. *Journal of Wildlife Management* 1/2:3-20.
- <sup>10</sup> Soulé, M.E. (ed.) 1987. *Conservation Biology. The Science of Scarcity and Diversity*. Sinauer Associates, Sunderland, Mass., 584pp. The quotation is from page ix. A rewriting and expansion of *Conservation Biology: an evolutionary-ecological perspective*, Soulé and Wilcox, 1980.
- <sup>11</sup> Chapman, G.A. and G.A. Feldhamer (eds.) 1982. *Wild Mammals of North America. Biology•Management•Economics*. Johns Hopkins University Press, Baltimore, Md., 1147pp. Second edition by G.A. Feldhamer, B.C. Thompson, and J.A. Chapman, 2003.
- <sup>12</sup> Novak, M., J.A. Baker, M.E. Obbard, and B. Malloch (eds.) 1987. *Wild Fur-bearer Management and Conservation in North America*. Ontario Ministry of Natural Resources, Toronto, Ont., Canada, 1150pp.
- <sup>13</sup> Nielsen, L.A. and D.L. Johnson (eds.) 1983. *Fisheries Techniques*. American Fisheries Society, Bethesda, Md., 468pp. [2nd ed., Murphy & Willis, 1996; 3rd ed., Zale et al., 2012).
- <sup>14</sup> [One Hundred Fifteenth and One Hundred Sixteenth] Annual Reports [of the] Massachusetts Division of Fisheries and Wildlife [Boston], [July 1 to June 30] 1980 and 1981, 62pp.
- <sup>15</sup> Since this was a 2-year combined Annual Report, I have separated the accomplishments and activities into annual segments, where possible.
- <sup>16</sup> “An Act authorizing the Commissioner of Administration to set fees and charges paid to the Commonwealth”, c. 572, St. 1980. See esp. §§ 231-248.
- <sup>17</sup> [One Hundred Seventeenth and One Hundred Eighteenth] [sic; this is only a 1-year, 117th Report] Annual Reports [of the] Massachusetts Division of Fisheries and Wildlife [Boston], [July 1 to June 30] 1982, 55pp.
- <sup>18</sup> Sczerzenie, P.J. 1981. *An ecological approach to deer management in Massachusetts*. Dissertation, University of Massachusetts, Amherst, 220pp.
- <sup>19</sup> Heusmann, H.W. and R.H. Bellville. 1982. *Wood duck research in Massachusetts, 1970-1980*. Massachusetts Division of Fisheries & Wildlife, Westborough, Mass., Research Bulletin 19, 67pp. Includes errata sheet.
- <sup>20</sup> “An Act relative to the use of certain weapons during the primitive hunting season”, c. 661, St. 1981.
- <sup>21</sup> “An Act concerning the establishment of a Connecticut River Atlantic Salmon Commission”, c. 716, St. 1981. CRASC was reauthorized for 20 years in 2002.
- <sup>22</sup> “An Act authorizing the Division of Capital Planning and Operations to convey certain land in the Town of Sunderland to the Department of the Interior, Fish and Wildlife Service”, c. 741. St. 1981.
- <sup>23</sup> “An Act relative to certain fish and game fees”, c. 758, St. 1981.



- <sup>24</sup> “An Act providing for the use of special equipment by handicapped hunters”, c. 39, St. 1982.
- <sup>25</sup> [One Hundred Nineteenth] [sic; this was misnumbered and is the 118th Report] Annual Report [of the] Massachusetts Division of Fisheries and Wildlife [Boston], [July 1, 1982 to June 30] 1983, 47pp.
- <sup>26</sup> See (among other critiques): Allen, S.K., Jr. and R.J. Waffendorf. 1987. Triploid grass carp: status and management implications. *Fisheries* (Bethesda) 12:20-24.
- <sup>27</sup> Olsen, G.H. 1983. Population dynamics of raccoons in Massachusetts. Dissertation, University of Massachusetts, Amherst, 179pp.
- <sup>28</sup> [One Hundred Nineteenth] Annual Report [of the] Massachusetts Division of Fisheries and Wildlife [Boston], [July 1, 1983 to June 30] 1984, 64pp. This is the correct 119th Annual Report.
- <sup>29</sup> “An Act relative to funding for nongame wildlife programs in the Commonwealth”, c. 330, St. 1983.
- <sup>30</sup> Elowe, K.D. 1984. Home range, movements, and habitat preferences of black bear in western Massachusetts. Thesis, University of Massachusetts, Amherst, 112pp. See also his later dissertation: “Factors affecting black bear reproductive success and cub survival in Massachusetts”, 1987, University of Massachusetts, Amherst, 71pp.
- <sup>31</sup> “An Act increasing the surety bond of persons authorized to issue licenses for the Division of Fisheries and Wildlife”, c. 538, St. 1983.
- <sup>32</sup> “An Act relative to the Connecticut River Salmon Compact”, c. 610, St. 1983.
- <sup>33</sup> [One Hundred and Twentieth] Annual Report [of the] Massachusetts Division of Fisheries and Wildlife [Boston], [July 1, 1984 to June 30] 1985, 49pp.
- <sup>34</sup> A policy for the conservation of inland fish and wildlife resources of Massachusetts. Adopted by the <Fisheries and Game> Board, August 30, 1984. 18pp. Amendments include those relative to naming of wildlife management areas (1980), issuance of farmer-landowner antlerless permits (1982), rules to speak before the Board (1984), *Massachusetts Wildlife* magazine (1986), land resources and disposition (1990), advertising (2008), and bicycle paths (2010).
- <sup>35</sup> For opposing views, see: Eveland, T.E. and E.B. Horton. 1984. The Crane and its deer. Friends of Animals, Inc., Norwalk, Conn., 32pp., and, Deblinger, R.D., D.W. Rimmer, J.J. Vaske, G.M. Vecellio, and M.P. Donnelly. 1993. Ecological benefits and hunter acceptance of a controlled deer hunt in coastal Massachusetts. *Northeast Wildlife* 50:11-21.
- <sup>36</sup> This was to be the highest amount ever received (1984-2012).
- <sup>37</sup> “An Act allowing for a turkey hunting season in a certain area of the Mount Greylock State Reservation”, c. 219, St. 1985.
- <sup>38</sup> “An Act further regulation commercial shooting preserves”, c. 254, St. 1985.
- <sup>39</sup> “An Act authorizing the shooting of certain wounded migratory game birds from a powered boat”, c. 329, St. 1985.

<sup>40</sup> “An Act authorizing the reproduction of the Fuertes bird paintings”, c. 483, St. 1985.

<sup>41</sup> “An Act making appropriations for the fiscal year nineteen hundred and eighty-six for the maintenance of the departments, boards, commissions, institutions and certain activities of the Commonwealth <etc.>”, c. 140, St. 1985. See § 52 (page 577-78 in the Acts & Resolves) relative to *Massachusetts Wildlife*.

<sup>42</sup> [One Hundred and Twenty-first] Annual Report [of the] Massachusetts Division of Fisheries and Wildlife [Boston], [July 1, 1985 to June 30] 1986, 50pp.

<sup>43</sup> Memorandum of Understanding concerning Bear and Moose Control <between the Division of Fisheries and Wildlife and the Division of Law Enforcement> <signed> Richard Cronin, Director Division of Fisheries & Wildlife <and> Allan McGroary, Director, Division of Law Enforcement. Later amended.

<sup>44</sup> Limited authorities cooperative agreement between the United States Fish & Wildlife Service and the Massachusetts Division of Fisheries and Wildlife <for> Endangered and Threatened Plant Species. Unnumbered pages <signed> William Ashe, Regional Director, USFWS, 28 January 1986 [and] Richard Cronin, Director, MDFW, 23 January 1986. Later amended.

<sup>45</sup> “An Act authorizing use of the Division of Fisheries and Wildlife Nongame Wildlife Fund to acquire other than fee interests in certain property”, c. 770, St. 1985.

<sup>46</sup> “An Act exempting veterinarians from civil liability as a result of rendering emergency care to nondomestic animals”, c. 131, St. 1986.

<sup>47</sup> [One Hundred and Twenty-second] Annual Report [of the] Massachusetts Division of Fisheries and Wildlife [Boston], [July 1, 1986 to June 30] 1987, 47pp.

<sup>48</sup> A cross between a domestic (i.e., hatchery-raised) brook trout and a wild-strain Canadian brook trout, so named for the Témiscamie River in Quebec. These trout allegedly have greater survival in acidified water than do domestic-strain trout and have a longer life span.

<sup>49</sup> “An Act protecting wildlife under the Wetlands Protection Act”, c. 262, St. 1986. Regulations addressing wildlife values and protection—other than fish, “rare” species and vernal pools—have yet to be developed and implemented.

<sup>50</sup> “An Act prohibiting the counterfeiting of tags and seals issued by the Division of Fisheries and Wildlife”, c. 159, St. 1986.

<sup>51</sup> “An Act regulating the transportation of certain reptiles and amphibians for commercial purposes”, c. 160, St. 1986.

<sup>52</sup> “An Act relative to contributions to the Nongame Wildlife Fund on state income tax returns”, c. 570, St. 1986.

<sup>53</sup> [One Hundred and Twenty-third] Annual Report [of the] Massachusetts Division of Fisheries and Wildlife [Boston], [July 1, 1987 to June 30] 1988, 51pp.

<sup>54</sup> For two historical perspectives on the effects of lead poisoning in waterfowl, see: McAtee, W.L. 1908. Lead poisoning in ducks. *Auk* 25:472, and, Sanderson, G.C. and F.C. Bellrose. 1986. A review of the problem of lead poisoning in waterfowl. Illinois Natural History Survey Special Publication No. 4, 34pp.

- <sup>55</sup> Heusmann, H W and T. Early 1988. A comparison of wooden boxes and plastic buckets as waterfowl nesting structures. *Wildlife Society Bulletin* 16:4548.
- <sup>56</sup> “An Act designating the Field Headquarters of the Division of Fisheries and Wildlife at the Lyman School for Boys in the Town of Westborough as the Richard Cronin Building”, c. 6, St. 1988.
- <sup>57</sup> [One Hundred and Twenty-fourth] Annual Report [of the] Massachusetts Division of Fisheries and Wildlife [Boston], [July 1, 1988 to June 30] 1989, 59pp.
- <sup>58</sup> Promulgated at 321 CMR 2.13.
- <sup>59</sup> Promulgated at 321 CMR 2.14.
- <sup>60</sup> Halliwell, D.B. 1989. A classification of streams in Massachusetts: to be used as a fisheries management tool. Dissertation, University of Massachusetts, Amherst, 234pp.
- <sup>61</sup> “An Act further regulating permitted shotgun shell size”, c. 193, St. 1988.
- <sup>62</sup> “An Act establishing a procedure for the disposal of certain killed deer”, c. 294, St. 1988.
- <sup>63</sup> [One Hundred and Twenty-fifth] Annual Report [of the] Massachusetts Division of Fisheries and Wildlife [Boston], [July 1, 1989 to June 30] 1990, 54pp.
- <sup>64</sup> *Commonwealth v. Black*, 403 Mass. 675, 679 (1989).
- <sup>65</sup> Newman, D.G. 1990. Habitat ecology of river otters in central Massachusetts. Thesis, University of Massachusetts, Amherst, 56pp.
- <sup>66</sup> Promulgated at 321 CMR 9.02.
- <sup>67</sup> “An Act making appropriations for the fiscal year nineteen hundred and ninety for the maintenance of the departments, boards, commissions, institutions and certain activities of the Commonwealth <etc.>”, c. 240, § 122, St. 1989.
- <sup>68</sup> “An Act relative to the establishment of nature preserves”, c. 652, St. 1989.
- <sup>69</sup> MacIvor, L.H. 1990. Population dynamics, breeding ecology, and management of piping plovers on outer Cape Cod, Massachusetts. Thesis, University of Massachusetts, Amherst, 100pp.
- <sup>70</sup> “An Act establishing the budget control and reform act of 1989”, c. 653, §§ 22 and 93, St. 1989.

Lessons Ably Formulated and Implemented as a Conservation Doctrine: the 1990s.

- <sup>1</sup> Accessed from <http://en.wikipedia.org/wiki/1990s>, on 17 March 2013.
- <sup>2</sup> Junger, S. 1997. *The Perfect Storm: a True Story of Men against the Sea*. W.W. Norton & Co., New York, 227pp.
- <sup>3</sup> Foster, C.H.W. 1998. The Massachusetts forest today. Pages 319-331 *in* *Stepping Back to Look Forward. A History of the Massachusetts Forest*. Harvard University for the Harvard Forest, Petersham, Mass., 339pp.

- <sup>4</sup> Geist, V. 1995. North American policies of wildlife conservation. Pages 77-129 in V. Geist and I. McTaggart-Cowan (eds.) *Wildlife Conservation Policy*. Detselig Enterprises, Ltd., Calgary, Alberta, Canada, 308pp. The quotation is from page 77.
- <sup>5</sup> Geist, V., S.P. Mahoney, and J.F. Organ. 2001. Why hunting has defined the North American model of wildlife conservation. *Transactions of the North American Wildlife and Natural Resources Conference* 66:175-185.
- <sup>6</sup> Organ, J.F., S.P. Mahoney and V. Geist. 2010. Born in the hands of hunters: the North American model of wildlife conservation. *The Wildlife Professional* 4(3):22-27.
- <sup>7</sup> Mahoney, S.P. and D. Cobb. 2010. Future challenges to the model. *The Wildlife Professional* 4(3):83-85.
- <sup>8</sup> Dunlap, T.R. 1988. *Saving America's Wildlife*. Princeton University Press, Princeton, N.J., 222pp.
- <sup>9</sup> Cartmill, M. 1993. *A View to a Death in the Morning*. Hunting and Nature through History. Harvard University Press, Cambridge, Mass., 331pp.
- <sup>10</sup> The anatomist and anthropologist Raymond Arthur Dart (1893-1988) proposed that early hominids evolved large brains and bipedal locomotion because those features allegedly facilitated hunting.
- <sup>11</sup> Herman, D.J. 2001. *Hunting and the American Imagination*. Smithsonian Institution Press, Washington, D.C., 356pp.
- <sup>12</sup> For another perspective on hunting traditions and ethics, see: Posewitz, J. 1994. *Beyond Fair Chase*. The ethic and tradition of hunting. Falcon Press Publishing, Helena, Mt., 118pp., and, 1999. *Inherit the Hunt*. A Journey into the Heart of American Hunting. Falcon Press, Helena, Mt., 122pp.
- <sup>13</sup> Dizard, J.E. 2003. *Mortal Stakes*. Hunters and Hunting in Contemporary America. University of Massachusetts Press, Amherst, Mass., 225pp. See esp. pages 199-207.
- <sup>14</sup> [One Hundred and Twenty-sixth] Annual Report [of the] Massachusetts Division of Fisheries and Wildlife [Boston], [July 1, 1990 to June 30] 1991, 53pp.
- <sup>15</sup> "An Act relative to the protection and maintenance of Quabbin watershed lands", c. 436, St. 1990.
- <sup>16</sup> Lyons, P.J. 1993. Deer management on a public water supply. *Northeast Wildlife* 50:29-36.
- <sup>17</sup> Dizard, J.E. 1994. *Going Wild*. Hunting, Animal Rights, and the Contested Meaning of Nature. University of Massachusetts Press, Amherst, Mass., 182pp.
- <sup>18</sup> This is still (as of 2012) an all-time record for the fall turkey season.
- <sup>19</sup> Decker, T.A. 1991. Mortality, habitat use, and bedsite characteristics of white-tailed deer fawns in western Massachusetts. Thesis, University of Massachusetts, Amherst, 92pp.
- <sup>20</sup> "An Act to provide protection for endangered and threatened species", c. 408, St. 1990.

- <sup>21</sup> The statute did not repeal G.L. c. 131, § 4(13A), thus there are two processes providing for lists of “rare” species. In actuality, the two lists (321 CMR 8.01 and 10.90) are cross-referenced to be identical.
- <sup>22</sup> “An Act making appropriations for the fiscal year nineteen hundred and ninety-one for the maintenance of the departments, boards, commissions, institutions and certain activities of the Commonwealth <etc.>”, c. 150, §§ 225, 226, and 312. These sections changed the name of the Nongame Wildlife Fund, provided for accrual of interest, and increased the waterfowl stamp fee and provided for allocation of stamp monies.
- <sup>23</sup> “An Act establishing a wildlands conservation stamp and a wildlands acquisition account”, c. 72, St. 1990.
- <sup>24</sup> “An Act relative to the revocation and suspension of fish and game licenses”, c. 371, St. 1990.
- <sup>25</sup> “An Act relative to the Massachusetts waterfowl stamp”, c. 433, St. 1990.
- <sup>26</sup> [One Hundred and Twenty-seventh] Annual Report [of the] Massachusetts Division of Fisheries and Wildlife [Boston], [July 1, 1991 to June 30] 1992, 51pp.
- <sup>27</sup> Jenkins, S.R. and W.G. Winkler. 1987. Descriptive epidemiology from an epizootic of raccoon rabies in the Middle Atlantic states, 1982-1983. *American Journal of Epidemiology* 126:429-437.
- <sup>28</sup> “An Act making appropriations for the fiscal year nineteen hundred and ninety-two for the maintenance of the departments, boards, commissions, institutions and certain activities of the Commonwealth <etc.>”, c. 138, § 49, St. 1991.
- <sup>29</sup> “An Act relative to the harassment of hunters, fishermen, and trappers”, c. 364, St. 1991.
- <sup>30</sup> “An Act designating the wild turkey as the game bird of the Commonwealth”, c. 406, St. 1991.
- <sup>31</sup> [One Hundred and Twenty-eighth] Annual Report [of the] Massachusetts Division of Fisheries and Wildlife [Boston], [July 1, 1992 to June 30] 1993, 48pp.
- <sup>32</sup> Fuller, D.P. 1993. Black bear population dynamics in western Massachusetts. Thesis, University of Massachusetts, Amherst, 136pp.
- <sup>33</sup> “An Act making appropriations for the fiscal year nineteen hundred and ninety-three for the maintenance of the departments, boards, commissions, institutions and certain activities of the Commonwealth <etc.>”, c. 133, § 488, St. 1992.
- <sup>34</sup> [One Hundred and Twenty-ninth] Annual Report [of the] Massachusetts Division of Fisheries and Wildlife [Boston], [July 1, 1993 to June 30] 1994, 50pp.
- <sup>35</sup> Jackson, S. and P. Mirick. 1993. Massachusetts snakes. A guide. Mass. Division of Fisheries and Wildlife & University of Massachusetts Cooperative Extension Service, Publication C-214, 20pp.
- <sup>36</sup> “An Act further regulating civil infractions”, c. 182, St. 1993.
- <sup>37</sup> “An Act relative to archery”, c. 217, St. 1993.



- <sup>38</sup> “An Act making appropriations for the fiscal year ending June thirtieth, nineteen hundred and ninety-four to provide for supplementing existing appropriations and for certain other activities and projects”, c. 495, St. 1993, §§ 33 and 34.
- <sup>39</sup> [One Hundred and Thirtieth] Annual Report [of the] Massachusetts Division of Fisheries and Wildlife [Boston], [July 1, 1994 to June 30] 1995, 50pp.
- <sup>40</sup> Promulgated at 321 CMR 4.09.
- <sup>41</sup> “An Act authorizing the division of capital planning and operations to transfer certain parcels of land in the Towns of Westborough and Northborough and the City of Worcester”, c. 329, St. 1994.
- <sup>42</sup> [One Hundred and Thirty-first] Annual Report [of the] Massachusetts Division of Fisheries and Wildlife [Boston], [July 1, 1995 to June 30] 1996, 51pp.
- <sup>43</sup> *Massachusetts Society for the Cruelty of Animals et al. v. Division of Fisheries and Wildlife* (and a companion case), 420 Mass. 639.
- <sup>44</sup> Promulgated at 321 CMR 2.07
- <sup>45</sup> Cardoza, J.E. 2009. The wild turkey in Massachusetts. Massachusetts Division of Fisheries & Wildlife, Westborough, Mass., Research Bulletin 20, 172pp.
- <sup>46</sup> York, E.C. 1996. Fisher population dynamics in north-central Massachusetts. Thesis, University of Massachusetts, Amherst, 122pp.
- <sup>47</sup> “An Act making appropriations for the fiscal year nineteen hundred and ninety-six for the maintenance of the departments, boards, commissions, institutions, and certain activities of the Commonwealth <etc.>”, c. 38, St. 1995, §§ 143, 144, 145 and 266.
- <sup>48</sup> “An Act providing for an environmental and protection program for the Commonwealth”, c. 15, St. 1996, §§ 25, 26 and 60 and items 2310-8960-62.
- <sup>49</sup> [One Hundred and Thirty-second] Annual Report [of the] Massachusetts Division of Fisheries and Wildlife [Boston], [July 1, 1996 to June 30] 1997, 53pp.
- <sup>50</sup> “An Act [sic] The Massachusetts Wildlife Protection Act”, c. 453, St. 1996. Enacted by ballot referendum at the November 5, 1996 state election. This legislation: (1) prohibited all traps except body-gripping traps and cage, box, or net traps, restricted body-gripping traps to certain health and safety situations, when so permitted by a municipal Board of Health, and allowed cage, box, and net traps, (2) prohibited the hunting of bear and bobcat with dogs or bait, except under permit for damage control or research, and (3) removed the requirement for Fisheries & Wildlife board members to have held a sporting license for five years.
- <sup>51</sup> In 1996, 85% of those voting in the election voted on Question 1 (the “Wildlife Protection Act”), with 55% “yes” and 30% “no”. In 1992, 95% of those voting in the election voted on Question 3 (“Proposition 2½”), with 56% “yes” and 40% “no”. The Wildlife Protection Act imposed certain requirements on municipal Boards of Health, which was determined by the Division of Local Mandates to be a “unfunded mandate” and thus a contravention of G.L. c. 59, § 21C as enacted by Question 3.
- <sup>52</sup> Promulgated at 321 CMR 2.08.
- <sup>53</sup> Promulgated at 321 CMR 2.05

- <sup>54</sup> Endangered Species Act Section 6 Cooperative Agreement among the National Marine Fisheries Service of the National Oceanic and Atmospheric Administration of the U.S. Department of Commerce, the Massachusetts Department of Fisheries, Wildlife & Environmental Law Enforcement, and the Massachusetts Division of Fisheries and Wildlife for the conservation of endangered and threatened species. <approved> July 8, 1996, <amended> November 13, 2012.
- <sup>55</sup> Davis, W.J. 1997. Massachusetts Wildlife Viewing Guide. Falcon Press, Helena, Mt., 96pp.
- <sup>56</sup> “An Act making appropriations for the fiscal year nineteen hundred and ninety-seven for the maintenance of the departments, boards, commissions, institutions, and certain activities of the Commonwealth <etc.>”, c. 151, §§ 290, 549 and 640.
- <sup>57</sup> “An Act relative to the use of certain firearms during the hunting season”, c. 296, St. 1996.
- <sup>58</sup> “An Act relative to the mandatory display of fish and game licenses”, c. 422, St. 1997.
- <sup>59</sup> [One Hundred and Thirty-third] Annual Report [of the] Massachusetts Division of Fisheries and Wildlife [Boston], [July 1, 1997 to June 30] 1998, 57pp.
- <sup>60</sup> Jackson, S. and T. Decker. 1993. Beavers in Massachusetts. Natural history, benefits and ways to resolve conflicts between people and beavers. University of Massachusetts Cooperative Extension System & Massachusetts Division of Fisheries and Wildlife, Publication C-213, 16pp. [Revised edition, 2004]
- <sup>61</sup> Langlois, S. and T. Decker. 1997. The use of water flow devices in addressing flooding problems caused by beaver in Massachusetts. Massachusetts Division of Fisheries & Wildlife, 13pp.
- <sup>62</sup> Milam, J.C. 1997. Home range, habitat use and conservation of spotted turtles (*Clemmys guttata*) in central Massachusetts. Thesis, University of Massachusetts, Amherst, Mass., 114pp.
- <sup>63</sup> French, T.W., J.E. Cardoza, and G.S. Jones. 1997. A homeowner’s guide to Massachusetts bats and bat problems (Rev. ed.) Massachusetts Division of Fisheries & Wildlife, 15pp.
- <sup>64</sup> “An Act allowing for the use of crossbows by certain handicapped persons”, c. 146, St. 1997.
- <sup>65</sup> “An Act authorizing the competitive disposition of certain land located in the Town of Wilbraham”, c. 175, St., 1996, and, “An Act authorizing certain conveyances in the Town of Wilbraham”, c. 143, St. 1998.
- <sup>66</sup> [One Hundred and Thirty-fourth] Annual Report [of the] Massachusetts Division of Fisheries and Wildlife [Boston], [July 1, 1998 to June 30] 1999, 51pp.
- <sup>67</sup> Connecticut River Atlantic Salmon Commission. 1998. Strategic plan for the restoration of Atlantic salmon to the Connecticut River. Connecticut River Atlantic Salmon Commission, Sunderland, Mass., 109pp.
- <sup>68</sup> McDonald, J.E., Jr. 1998. The effects of food supply and nutrition on black bear reproductive success and milk composition. Dissertation, University of Massachusetts, Amherst, 156pp.

<sup>69</sup> Barbour, H., T. Simmons, P. Swain and H. Woolsey. 1998. Our irreplaceable heritage. Massachusetts Division of Fisheries and Wildlife & Massachusetts Chapter of The Nature Conservancy, 83pp.

<sup>70</sup> “An Act making appropriations for the fiscal year 1999 for the maintenance of the departments, boards, commissions, institutions, and certain activities of the Commonwealth <etc.>”, c. 194, § 309, St. 1998.

<sup>71</sup> [One Hundred and Thirty-fifth] Annual Report [of the] Massachusetts Division of Fisheries and Wildlife [Boston], [July 1, 1999 to June 30] 2000, 53pp.

<sup>72</sup> Agreement between the Division of Law Enforcement and the Division of Fisheries and Wildlife Governing the Hunter Education Program<signed> David M. Peters, Commissioner, Department of Fisheries, Wildlife & Environmental Law Enforcement, Richard A. Murray, Director, Division of Law Enforcement <and> Wayne F. MacCallum, Director, Division of Fisheries & Wildlife, April 26, 2000.

The Intrinsic Value of Biological Diversity and [its] Importance for Evolution and for Maintaining Life Sustaining Systems of the Biosphere: the 2000s.

<sup>1</sup> Convention on Biological Diversity, United Nations, 1992. Preamble, paragraphs 1 and 2.

<sup>2</sup> Accessed from [\*\*http://en.wikipedia.org/wiki/2000s\\_\(decade\)\*\*](http://en.wikipedia.org/wiki/2000s_(decade)) on 22 March 2013.

<sup>3</sup> Accessed from [\*\*http://www.census.gov/2010\\_census/data/\*\*](http://www.census.gov/2010_census/data/) on 22 March 2013.

<sup>4</sup> de la Cr  tz, A.L., L.S. Fletcher, P.E. Gregory, W.R. Van Doren and P.K. Barten. 2010. An assessment of the forest resources of Massachusetts. Department of Natural Resources Conservation, University of Massachusetts, Amherst, and Massachusetts Department of Conservation & Recreation, 175pp. See pages 173-74.

<sup>5</sup> Accessed from [\*\*http://en.wikipedia.org/wiki/International\\_Year\\_of\\_Biodiversity\*\*](http://en.wikipedia.org/wiki/International_Year_of_Biodiversity) on 22 March 2013.

<sup>6</sup> Accessed from [\*\*http://en.wikipedia.org/wiki/Convention\\_on\\_Biological\\_Diversity\*\*](http://en.wikipedia.org/wiki/Convention_on_Biological_Diversity) on 22 March 2013.

<sup>7</sup> Exclusive of the United States, Andorra and the Holy See. The U.S.A. has signed—but not ratified—the Convention.

<sup>8</sup> Rands, M.R.W., W.M. Adams, L. Bennun, S.H.M. Butchart, A. Clements, D. Coomes, A. Entwistle, I. Hodge, V. Kapos, J.P.W. Scharlemann, W.J. Sutherland, and B. Vira. 2010. Biodiversity conservation: challenges beyond 2010. *Science* 329:1298-1303.

<sup>9</sup> Durand, B. 2001. Scalable solutions: managing biodiversity in Massachusetts. *Transactions of the North American Wildlife and Natural Resources Conference* 66:33-38.

<sup>10</sup> Massachusetts Natural Heritage and Endangered Species Program. 2001. Biomap: guiding land conservation for biodiversity in Massachusetts. Massachusetts Division of Fisheries & Wildlife, Westborough, Mass., 58pp.

- <sup>11</sup> Massachusetts Natural Heritage and Endangered Species Program. 2003. Living Waters: guiding the protection of freshwater biodiversity in Massachusetts. Massachusetts Division of Fisheries & Wildlife, Westborough, Mass., 50pp.
- <sup>12</sup> Woolsey, H., A. Finton and J. DeNormandie. 2010. BioMap 2: conserving the biodiversity of Massachusetts in a changing world. Massachusetts Division of Fisheries & Wildlife and The Nature Conservancy, 60pp.
- <sup>13</sup> “Department of the Interior and Related Agencies Appropriations Act, 2002”, P.L. 107-63, November 5, 2001, 115 Stat. 414 et seq. See § 414. See later reauthorizations, 2007 and 2012.
- <sup>14</sup> [One Hundred and Thirty-sixth] Annual Report [of the] Massachusetts Division of Fisheries and Wildlife [Boston], [July 1, 2000 to June 30] 2001, 63pp.
- <sup>15</sup> “An Act relative to foothold traps and certain other devices”, c. 139, St. 2000.
- <sup>16</sup> [One Hundred and Thirty-seventh] Annual Report [of the] Massachusetts Division of Fisheries and Wildlife [Boston], [July 1, 2001 to June 30] 2002, 68pp.
- <sup>17</sup> Whitlock, A.L. 2002. Ecology and status of the bog turtle (*Clemmys muhlenbergii*) in New England. Dissertation, University of Massachusetts, Amherst, 147pp.
- <sup>18</sup> “An Act designating natural heritage functions of the department of fisheries, wildlife and environmental law enforcement”, c. 23, St. 2002.
- <sup>19</sup> “An Act relative to the environmental protection of the Massachusetts Military Reservation”, c. 47, St. 2002.
- <sup>20</sup> [One Hundred and Thirty-eighth] Annual Report [of the] Massachusetts Division of Fisheries and Wildlife [Boston], [July 1, 2002 to June 30] 2003, 71pp.
- <sup>21</sup> “An Act making appropriations for the fiscal year 2004 for the maintenance of the departments, boards, commissions, institutions, and certain activities of the Commonwealth <etc.>”, c. 26, §§ 384, 622, 710 and 713, St. 2003.
- <sup>22</sup> “An Act authorizing certain conveyances of land to establish the Southeastern Massachusetts Bioreserve”, c. 266, St. 2002.
- <sup>23</sup> “An Act further regulating the use of crossbows in the Commonwealth”, c. 397, St. 2002.
- <sup>24</sup> [One Hundred and Thirty-ninth] Annual Report [of the] Massachusetts Division of Fisheries and Wildlife [Boston], [July 1, 2003 to June 30] 2004, 67pp.
- <sup>25</sup> “An Act relative to the Inland Fisheries and Game Fund”, c. 101, St. 2003.
- <sup>26</sup> [One Hundred and Fortieth] Annual Report [of the] Massachusetts Division of Fisheries and Wildlife [Boston], [July 1, 2004 to June 30] 2005, 75pp.
- <sup>27</sup> Blodget, B.G., R. Dettmers and J. Scanlon. 2009. Status and trends of birds in an extensive western Massachusetts forest. *Northeastern Naturalist* 16:423-442.
- <sup>28</sup> [One Hundred and Forty-first] Annual Report [of the] Massachusetts Division of Fisheries and Wildlife [Boston], [July 1, 2005 to June 30] 2006, 77pp.
- <sup>29</sup> Division of Fisheries and Wildlife. 2006. Massachusetts Comprehensive Wildlife

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- <sup>30</sup> “An Act relative to a loaded shotgun or rifle”, c. 137, St. 2005.
- <sup>31</sup> [One Hundred and Forty-second] Annual Report [of the] Massachusetts Division of Fisheries and Wildlife [Boston], [July 1, 2006 to June 30] 2007, 86pp.
- <sup>32</sup> Somers, P., R. Kramer, K. Lombard and B. Brumback. 2006. A guide to invasive plants in Massachusetts. Massachusetts Division of Fisheries & Wildlife, 79pp.
- <sup>33</sup> “An Act removing automatic qualification for certain licenses”, c. 137, St. 2006.
- <sup>34</sup> [One Hundred and Forty-third] Annual Report [of the] Massachusetts Division of Fisheries and Wildlife [Boston], [July 1, 2007 to June 30] 2008, 88pp. <sup>35</sup> “An Act prohibiting Internet hunting”, c. 83, St. 2007.
- <sup>36</sup> [One Hundred and Forty-fourth] Annual Report [of the] Massachusetts Division of Fisheries and Wildlife [Boston], [July 1, 2008 to June 30] 2009, 85pp.
- <sup>37</sup> Kashiwagi, M. and T. Richards. 2009. Development of target fish community models for Massachusetts mainstem rivers. Massachusetts Division of Fisheries & Wildlife, Technical Report, 85pp.
- <sup>38</sup> [One Hundred and Forty-fifth] Annual Report [of the] Massachusetts Division of Fisheries and Wildlife [Boston], [July 1, 2009 to June 30] 2010, 87pp.
- <sup>39</sup> “An Act relative to the inspection, registration, construction and reconstruction of dams”, c. 330, St. 2002. See G.L. c. 253, §§ 44-50 and 302 CMR 10.00-10.16.
- <sup>40</sup> Cardoza, J.E., D.P. Fuller and R. Taylor. 2009. What’s new in Massachusetts black bear studies? *Massachusetts Wildlife* 59(1):33-37.
- <sup>41</sup> Armstrong, D.S., T.A. Richards and S.L. Brandt. 2010. Preliminary assessment of factors influencing riverine fish communities. U.S. Geological Survey, Open File Report 2010-1139, 44pp. Accessed from <http://pubs.usgs.gov/of/2010/1139> on 26 March 2013.
- <sup>42</sup> [One Hundred and Forty-sixth] Annual Report [of the] Massachusetts Division of Fisheries and Wildlife [Boston], [July 1, 2010 to June 30] 2011, 93pp.
- <sup>43</sup> “An Act regulating the use of off-highway and recreation vehicles”, c. 202, St. 2010.
- <sup>44</sup> Wattles, D.W. 2011. Status, movements and habitat use of moose in Massachusetts. Thesis, University of Massachusetts, Amherst, 115pp.
- <sup>45</sup> Coleman, J. et al. 2011. A national plan for assisting federal agencies, states and tribes in managing white-nose syndrome in bats. U.S. Fish & Wildlife Service, 17pp. Losses now (2012) approximate 5.7-6.7 million bats.
- <sup>46</sup> [One Hundred and Forty-seventh] Annual Report [of the] Massachusetts Division of Fisheries and Wildlife [Boston], [July 1, 2011 to June 30] 2012, 96pp.
- <sup>47</sup> “An Act making appropriations for the fiscal year 2012 for the maintenance of the departments, boards, commissions, institutions, and certain activities of the Common-



wealth <etc.>”, c. 68, § 92, St. 2011.

<sup>48</sup> Slater, C. 2013. Anadromous fish investigations. Progress Report, 2012-2013. Massachusetts Federal Aid in Fisheries Restoration Grant F-45-R-31, [14]pp.

<sup>49</sup> Data provided by Caleb Slater, Massachusetts Division of Fisheries & Wildlife, March 2013.

<sup>50</sup> MacCallum, W. 2013. Letting go of a dream. Massachusetts Wildlife 63(1):2-3.

<sup>51</sup> DFW Biodiversity Initiative Update—Spring 2013. Accessed from <http://www.mass.gov/dfwele/dfw/habitat/management/bdi/> on 1 April 2013.

### In Summary: the Essence of Wildlife Management:

<sup>1</sup> Riley, S.J., D.J. Decker, L.H. Carpenter, J.F. Organ, W.F. Siemer, G.F. Mattfeld, and G. Parsons. 2002. The essence of wildlife management. Wildlife Society Bulletin 30:585-593.

<sup>2</sup> Buchan, J. 1923. Introduction *in* The Nations of Today. Vol. 1. Great Britain. Houghton-Mifflin Co., Boston. The quotation is from page 12.

<sup>3</sup> DeGraaf, R.M. and W.H. Healy. 1993. The myth of nature’s constancy—preservation, protection and ecosystem management. Transactions of the North American Wildlife and Natural Resources Conference 58:17-28.

<sup>4</sup> Hoffer, E. 1967. The Temper of Our Times. Harper & Row, New York, 111pp. “The nature of a society is largely determined by the direction in which talent and ambition flow—by the tilt of the social landscape” (p. 104).

<sup>5</sup> Eliot, T.S. [1943] 1952. Burnt Norton. Pages 117-122 *in* The Complete Poems and Plays, 1909-1950. Harcourt, Brace & World, Inc., New York, 392pp. The quotation is from Pt. I, page 117. Eliot emphasizes the need of the individual to focus on the present moment.

<sup>6</sup> “An Act concerning obstructions to the passage of fish in the Connecticut and Merrimack Rivers”, c. 238, St. 1866.

<sup>7</sup> [First] Report of the Commissioners of Fisheries, for the year ending January 1, 1867. Commonwealth of Massachusetts, House Document 3, [Wright & Potter? Boston] submitted November 30, 1866, [9]pp. [in transcription].

<sup>8</sup> Department of Fish and Game Affirmative Action Report, second quarter FY13, 28 March 2013. Totals do not include 4 vacant full-time positions or seasonal employees (an indeterminate number are generally hired annually in spring and summer).

<sup>9</sup> In 1977, women comprised 25% of the students in college programs in wildlife and 20% of those in fisheries, most as undergraduates. See: Hodgdon, H.E. 1980. Enrollment of women and ethnic minorities in wildlife curricula, 1977. Wildlife Society Bulletin 8:158-163.

<sup>10</sup> G.L. c. 131 and 131A and 321 CMR. Some few additional duties, responsibilities and powers appear elsewhere in law.

<sup>11</sup> MacDonnell, C.A. 2012. Wildlife lands acquisition and inventory. FY12 Draft. Massachusetts Division of Fisheries & Wildlife, [15]pp.

<sup>12</sup> [One Hundred and Forty-seventh] Annual Report [of the] Massachusetts Division of Fisheries and Wildlife [Boston], [July 1, 2011 to June 30] 2012, 96pp.

<sup>13</sup> Marine fish and fisheries, including marine molluscs and crustaceans, are subject to the powers and authorities of the Division of Marine Fisheries.

<sup>14</sup> Regulatory authority is a delegation of legislative power to a body or individual, subject to any constraints set forth in the enabling legislation. This delegation is typically done because the proposed regulatory provisions change frequently (and may need to be done quickly), are lengthy, or require specialized technical knowledge and detail. The Division's regulations, severally or individually, typify these considerations.

<sup>15</sup> Galsworthy, J. [1928] 1987. A Modern Comedy. Book III. Swan Song. Part II. Chapter VI. Charles Scribner's Sons, Macmillan Publishing House, New York, 722pp. The quotation is from page 587.

<sup>16</sup> Leopold, A. 1933. Game Management. Charles Scribner's Sons, New York, 481pp. See pages 4-5 and 407.

<sup>17</sup> Division of Fisheries and Wildlife. 2006. Massachusetts Comprehensive Wildlife Conservation Strategy, 2005. Executive Office of Environmental Affairs, Division of Fisheries & Wildlife, Boston, Mass., 790pp. Available at: **[http://www.mass.gov/dfwele/dfw/habitat/cwcs/pdf/mass\\_cwcs\\_final.pdf](http://www.mass.gov/dfwele/dfw/habitat/cwcs/pdf/mass_cwcs_final.pdf)**.

<sup>18</sup> Inkley, D.B., M.G. Anderson, A.R. Blaustein, V.R. Burkett, B. Felzer, B. Griffith, J. Price, and T.L. Root. 2004. Global climate change and wildlife in North America. The Wildlife Society, Washington, D.C., Technical Review 04-2, 26pp.

<sup>19</sup> Hayes, D.J. 2011. Facing the inevitable. The Wildlife Professional 5(3):24-25. See also the subsequent papers in the same issue.

<sup>20</sup> Wildlife Management Institute (ed.). 2008. Season's end: global warming's threat to hunting and fishing. Bipartisan Policy Center, Washington, D.C., 111pp.

<sup>21</sup> O'Leary, J. 2008. Getting ready for the warming. Massachusetts Wildlife 58(4):4-12.

<sup>22</sup> O'Leary, J. 2012. Adapting to climate change. Massachusetts Wildlife 62(4):4-13.

<sup>23</sup> Accessed from **<http://www.mass.gov/dfwele/climatechange.htm>** on 1 April 2013.

<sup>24</sup> Unger, K. 2011. A voice for caution over fracking. The Wildlife Professional 5(4):56-59.

<sup>25</sup> Dobb, E. 2013. America strikes new oil. National Geographic 223(3):28-59.

<sup>26</sup> Taunton [Mass.] LNG Terminal. Accessed from **<http://www.wbur.org/2011/04/20/fall-river-natural-gas>** on 1 April 2013.

<sup>27</sup> Arnett, E.B., D.B. Inkley, D.H. Johnson, R.P. Larkin, S. Manes, A.M. Manville, R. Mason, M. Morrison, M.D. Strickland, and R. Thrasher. 2007. Impacts of wind energy facilities on wildlife and wildlife habitat. The Wildlife Society, Bethesda, Md., Technical Review 07-2, 51pp.

- <sup>28</sup> The “Cape Wind” project. Accessed from [http://en.wikipedia.org/wiki/Cape\\_Wind](http://en.wikipedia.org/wiki/Cape_Wind) on 1 April 2013.
- <sup>29</sup> Friend, M., J.W. Hurley, P. Nol, and K. Wesenberg. 2006. Disease emergence and resurgence: the wildlife-human connection. U.S. Geological Survey, Reston, Va., Circular 1285, 388pp.
- <sup>30</sup> Yablsey, M.J., J.R. Fischer and S.M. Hernandez. 2012. The lethal jump from wildlife to humans. *The Wildlife Professional* 6(1):40-43. See also several associated papers in the same issue.
- <sup>31</sup> Peterson, M.J. and P.J. Ferro. 2012. Wildlife health and disease. Surveillance, investigation and management. Pages 181-206 in *The Wildlife Management Techniques Manual*. Research. Vol. 1. Johns Hopkins University Press, Baltimore, Md., 686pp.
- <sup>32</sup> Jones, K.E., N.G. Patel, M.A. Levy, A. Storeygard, D. Balk, J.L. Gittleman and P. Daszak. 2008. Global trends in emerging infectious diseases. *Nature* 451:990-994.
- <sup>33</sup> Conover, M. 2002. *Resolving Human-Wildlife Conflicts. The Science of Wildlife Damage Management*. Lewis Publishers, CRC Press, Boca Raton, Fla., 418pp.
- <sup>34</sup> Jewell, P.A. and S. Holt (eds.) 1981. *Problems in Management of Locally Abundant Wild Mammals*. Academic Press, New York, 361pp.
- <sup>35</sup> Woodroffe, R., S. Thirgood and A. Rabinowitz (eds.) 2005. *People and Wildlife. Conflict or Coexistence?* Cambridge University Press, Cambridge, U.K., 497pp.
- <sup>36</sup> Deblinger, R.D., W.A. Woytek, and R.R. Zwick. 1999. Demographics of voting on the 1996 Massachusetts ballot referendum. *Human Dimensions of Wildlife* 4:40-55.
- <sup>37</sup> DeStefano, S., R.D. Deblinger and C. Miller. 2005. Suburban wildlife: Lessons, challenges, and opportunities. *Urban Ecosystems* 8:131-137.
- <sup>38</sup> The reference is to William Faulkner’s (1897-1962) evocative short novel “The Bear”.
- <sup>39</sup> DeStefano, S. and R.D. Deblinger. 2005. Wildlife as valuable natural resources vs. intolerable pests: a suburban wildlife management model. *Urban Ecosystems* 8:179-190.
- <sup>40</sup> DeStefano, S. 2010. *Coyote at the Kitchen Door. Living with Wildlife in Suburbia*. Harvard University Press, Cambridge, Mass., 196pp.
- <sup>41</sup> Leopold 1933:407.
- <sup>42</sup> Enck, J.W., D.J. Decker, S.J. Riley, J.F. Organ, L.H. Carpenter, and W.F. Siemer. 2006. Integrating ecological and human dimensions in adaptive management of wildlife-related impacts. *Wildlife Society Bulletin* 34:698-705.
- <sup>43</sup> DeLany, B.W., Jr., E. Johnson and S. Dawood. 2005. Communication: the future wildlife manager’s greatest asset. *Transactions of the North American Wildlife & Natural Resource Conference* 70:110-122.
- <sup>44</sup> Decker, D.J., C.C. Krueger, R.A. Baer, Jr., B.A. Knuth, and M.R. Richmond. 1996. From clients to stakeholders: a philosophical shift for fish and wildlife management. *Human Dimensions of Wildlife* 1:70-82.

- <sup>45</sup> Carpenter, L.H., D.J. Decker and J.F. Lipscomb. 2000. Stakeholder acceptance capacity in wildlife management. *Human Dimensions of Wildlife* 5:5-19.
- <sup>46</sup> Williams, S. 2010. Wellspring of wildlife funding. *The Wildlife Professional* 4(3):35-38.
- <sup>47</sup> Regan, R.J. 2010. Priceless, but not free. *The Wildlife Professional* 4(3):39-41.
- <sup>48</sup> Attributed to Otto von Bismarck (1815-1898).
- <sup>49</sup> Wengert, N. 1955. *Natural resources and the political struggle*. Random House, New York, Studies in Political Science PS-24, 71pp.
- <sup>50</sup> Edwards, F.N. and M.L. Gibeau. 2013. Engaging people in meaningful problem solving. *Conservation Biology* 27:239-241.
- <sup>51</sup> Louv, R. 2006. *Last Child in the Woods. Saving Our Children from Nature-deficit Disorder*. Algonquin Books of Chapel Hill, Chapel Hill, N.C., 334pp.
- <sup>52</sup> Noss, R.J. 1996. The naturalists are dying off. *Conservation Biology* 10:1-3.
- <sup>53</sup> Hafner, M.S. 2007. Field research in mammalogy: an enterprise in peril. *Journal of Mammalogy* 88:1119-1128.
- <sup>54</sup> Responsive Management/National Shooting Sports Foundation. 2008. *The future of hunting and the shooting sports: research-based recruitment and retention strategies*. Produced for the U.S. Fish & Wildlife Service, Harrisonburg, Va., 261pp.
- <sup>55</sup> Joyce, J. [1939] 1959. *Finnegan's Wake*. The Viking Press, New York, 628pp. The quotation is from page 3. Joyce drew heavily on the work of Giovanni Battista Vico (1668-1744), who proposed a cyclical theory of history.

