



**Natural Heritage
& Endangered Species
Program**

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Massachusetts Division of Fisheries & Wildlife

**Many-fruited Seedbox
Ludwigia polycarpa
Short & Peter**

State Status: **Endangered**
Federal Status: **None**

GENERAL DESCRIPTION: Many-fruited Seedbox is a much-branched, 2 to 10 dm (7 in. - 3 ft.) tall, herbaceous perennial with small, inconspicuous, 4-sided greenish flowers occurring in the axils of the upper leaves. This member of the Evening Primrose family (Onagraceae) is found in swamps, sloughs, marshes, and wet prairies.

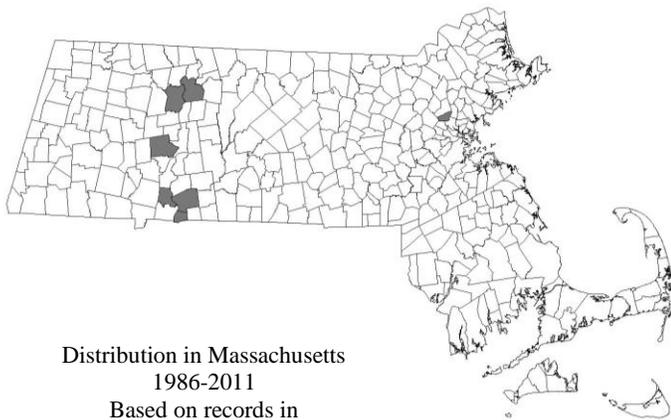
AIDS TO IDENTIFICATION: Many-fruited Seedbox has erect, 4-angled stems with sessile, alternate leaves that are lanceolate or linear-lanceolate in shape and 4 to 10 cm (~1.5-4 in.) long. Plants bloom in August and September, and the flowers are sessile or on obscure pedicels less than 1 mm long in the leaf axils of elongate, leafy spikes. Four minute, greenish petals arise from the top of each side of a 4-sided cup-like receptacle (hypanthium) surrounding the ovary. The fruit is a roundly 4-sided or shallowly grooved, short-cylindric capsule that is 4-7 mm long (1/8-1/4 in.) and 3-5 mm in diameter. The capsule is smooth (glabrous) and contains many seeds. Short, leaf-like appendages called bracteoles are inserted well above the base of the hypanthium. The lack of definite pedicels for the flowers



USDA-NRCS PLANTS Database / Britton, N.L., and A. Brown. 1913. *An illustrated flora of the northern United States, Canada and the British Possessions*. 3 vols. Charles Scribner's Sons, New York. Vol. 2: 587.

differentiates *L. polycarpa* from the similar *L. alternifolia*, which has pedicels 3-5 mm long. Many-fruited Seedbox should not be confused with species in the loosestrife genus (*Lythrum*) in the family Lythraceae. True loosestrifes usually have 6-merous flowers with red-purple to white petals and 2-celled capsules.

HABITAT AND ASSOCIATED SPECIES: In Massachusetts, Many-fruited Seedbox occurs almost exclusively in river floodplains, where it inhabits wet, exposed mud in oxbows and depressions within the zone of annual flooding. Canopy cover at the floodplain sites varies from nearly open to closed and is composed mainly of Silver Maple (*Acer saccharinum*), Green Ash (*Fraxinus pennsylvanica*), Pin Oak (*Quercus palustris*), and/or Black Willow (*Betula nigra*). Other frequent associates are Northern Water-plantain (*Alisma subcordatum*, formerly *A. plantago-aquatica*), False



Distribution in Massachusetts
1986-2011
Based on records in
Natural Heritage Database

A Species of Greatest Conservation Need in the Massachusetts State Wildlife Action Plan

Massachusetts Division of Fisheries & Wildlife

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Nettle (*Boehmeria cylindrica*), False Water-pepper (*Persicaria*, (formerly *Polygonum*) *hydropiperoides*), Ditch-stonecrop (*Penthorum sedoides*), Water Purslane (*Ludwigia palustris*), Swamp Candles (*Lysimachia terrestris*), and Buttonbush (*Cephalanthus occidentalis*).

RANGE: The documented range of Many-fruited Seedbox extends from central Ohio and southern Ontario to southeastern Minnesota south to the Ohio River Valley of Kentucky, northeastern Arkansas, eastern Nebraska and eastern Kansas. To the northeast, this seedbox is a rare disjunct, occurring locally along the Susquehanna River in Pennsylvania, near Lake Champlain in Vermont, and along the Connecticut River in Massachusetts.

POPULATION STATUS IN MASSACHUSETTS:

Many-fruited Seedbox is listed under the Massachusetts Endangered Species Act as Endangered. All listed species are protected from killing, collecting, possessing, or sale and from activities that would destroy habitat and thus directly or indirectly cause mortality or disrupt critical behaviors. There are eleven known stations, seven extant and four historical (unverified since 1986), with all but one occurring in the Connecticut River valley. Many-fruited Seedbox is considered to be rare in Vermont and Pennsylvania, and is thought to be extirpated in Connecticut.

MANAGEMENT RECOMMENDATIONS: As with many rare species, exact needs for management of Many-fruited Seedbox are not known. The following comments are based primarily on observations of populations in Massachusetts. Although Many-fruited Seedbox inhabits a wide variety of wetland habitats in the Midwest, it is mainly limited to river floodplains in Massachusetts and its occurrence is linked to the availability of suitable floodplain habitat. Undisturbed floodplain habitat is rare throughout the state due to housing and industrial development and to conversion of these highly-fertile areas to agricultural land. The success of Many-fruited Seedbox in Massachusetts will depend on the protection of remaining floodplain habitat, rather than species-specific management techniques.

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