



## - College Internships - *Buzzards Bay Tern Restoration Project*

**College-level interns are needed to restore rare and endangered terns to Bird, Ram, and Penikese Islands in Buzzards Bay, Massachusetts.** These islands support nearly half the North American population of the federally endangered Roseate Tern; active management to protect the population is critical to recovery.

Interns are a critical part of our team: they will work closely with the Project Leader and Site Managers and will gain a variety of hands-on skills. Activities include censusing of Common, Roseate, and Arctic Terns; monitoring tern growth and productivity; trapping and banding; reading bands on adults through spotting scopes; monitoring productivity of American Oystercatchers; discouragement, censusing, and monitoring productivity of nesting gulls; habitat management; maintaining field notebooks; and data management.



Tern chick  
banding



Roseate Tern

Terns are small, ground-nesting seabirds that are highly charismatic. The species we are working with nest in dense colonies and are very aggressive. They protect their nests and young by diving at, pecking, and defecating on intruders, including researchers. Extreme care must be exercised when working around their camouflaged eggs and chicks.

Most interns can expect to rotate among islands. When at Ram and Bird, the crew will travel to islands on a daily basis in a small boat on an irregular 5-6 day/week schedule. When at Penikese, the crew will set up and live in a field camp and work on an irregular 5-7 day/week schedule depending on weather and an irregular boat schedule. Applicants must be able to carry heavy field equipment a distance of  $\frac{1}{2}$  mile for camp set-up and break-down, and be comfortable living in a remote island setting with limited facilities for up to 2-3 weeks at a time.



Nest monitoring

**HOUSING** – A crew house on the mainland is provided when interns are not camping at Penikese.

Common Tern at Penikese camp

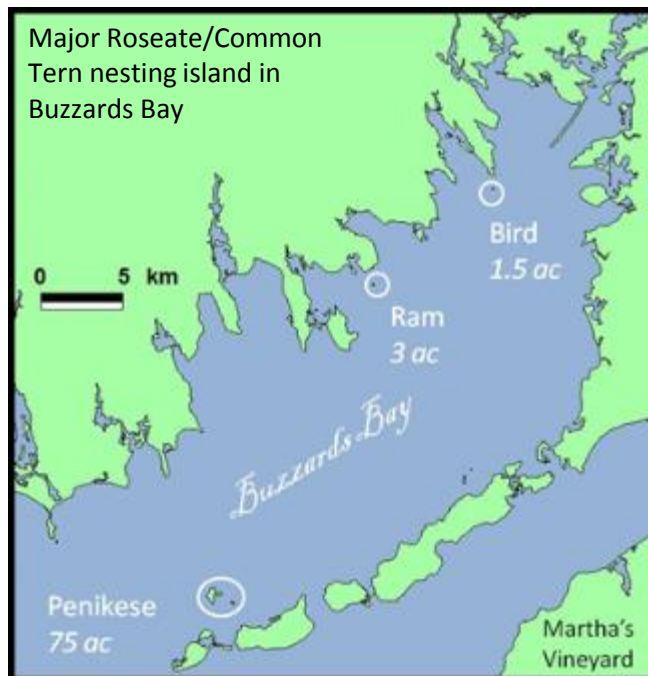


**DATES** – Dates are flexible to accommodate college calendars. Our greatest need is from early May through mid-July. Some work on weekends and holidays is expected. Part time or short term opportunities are possible.

Common Tern on human “perch”



Major Roseate/Common Tern nesting island in Buzzards Bay



**QUALIFICATIONS** – Previous field experience looked upon favorably, but enthusiasm and strong work ethic are more important; good opportunity for an undergraduate or recent graduate to gain field skills. Candidates should be self-motivated, organized, mature, have a strong work ethic, pay close attention to detail, be able to live and work cooperatively with others, be able to maintain a positive attitude under a heavy workload, and be in good physical condition. Having a vehicle to travel to field sites is helpful, but not required.

**COMPENSATION** – Interns may stay at our crew house for no charge. You may be eligible for credit or a monetary stipend through your college; however, MassWildlife does not provide financial compensation.

Newly hatched tern chicks



**TO APPLY** – Please email:

- (1) a cover letter,
- (2) a resume detailing your education, experience (paid or volunteer), and any special skills, and
- (3) names, email addresses, and phone numbers of three references

to Carolyn Mostello  
([carolyn.mostello@mass.gov](mailto:carolyn.mostello@mass.gov)). Applications will be reviewed on a rolling basis.

## Internship Details

### Background, colonies

Tern populations in Massachusetts were drastically reduced in numbers by plume-hunters (late-1800s), gulls (1930s-70s), and the release of PCBs into the environment (1940s-70s). Since 1970s, a tremendous amount of effort and funding has gone into tern restoration. The Buzzards Bay Tern Project takes place on the 3 major nesting islands in Buzzards Bay: Bird, Ram, and Penikese. Common Terns (state-listed as Special Concern) and federally-endangered Roseate Terns nest on all 3 islands. Because about 45% of the Northeast population of the Roseate Tern nests in Buzzards Bay, these islands are critical to recovery efforts.

Working in our large tern colonies in Buzzards Bay is an amazing experience for many people, but it can be overwhelming for some. Terns in Buzzards Bay have been studied intensively for many years, and they are quite acclimated to us, not leaving their nests until we approach closely. This loss of fear towards familiar humans means that they behave extra-aggressively towards us, as they do not fear retaliation! Whenever you walk around the colony, you can expect a small cloud of terns to hover over your head, making you aware of their displeasure by shrieking, diving at you, pecking your head, ears, or fingers (even drawing blood), and defecating on you. Sometimes they stand on your head or back and defend their perch (you!) from other terns. You will spend most of the day speaking quite loudly so that your crewmates can hear you over the din of thousands of shrieking terns. You can never take a step without looking at your feet: terns nest right on the ground, and nesting densities reach about 1.5 nests/m<sup>2</sup> in the densest portions of the colonies. Eggs and chicks are camouflaged, chicks are mobile soon after hatching, and they run and hide everywhere. The vegetation gets quite thick because of all the tern “fertilizer” and every footstep must be watched with care. For these reasons, it is imperative that people working in the colonies be highly-attentive and able to handle the noise, the mess, and the pecking, all while carefully collecting data. “Poop jackets” and modified hats (with padding and/or sticks taped to the top) make things tolerable for most people, but it will almost always be chaotic in the colony, because terns rely on unpleasant behaviors to defend themselves against predators and intruders.

Bird (off of Marion) and Ram (off of Mattapoisett) are small (1 and 3 ac), close to the mainland, and saturated with terns (about 3-4,000 pairs on each). Penikese (in the Elizabeth Islands, close to Cuttyhunk Island) is relatively large (75 ac), is situated about 5 miles from the mainland, and has ~1,200 pairs of terns. Historically, 10,000 pairs nested in 1950s, so there is much room for growth. On Penikese, only about 25% of the island is managed for terns and the rest of the island is a large Herring and Great Black-backed Gull colony. Penikese is owned by MassWildlife and for many years we have allowed a small school for troubled boys (called the Penikese Island School) to operate on the island. The school is currently on hiatus, but may be open again next spring/summer with a program geared towards young adults.

### Tern work

We follow the same established, biological protocols on all three islands to coordinate the tern work closely. This way, our data are comparable among sites and our staff can move from site to site and easily integrate themselves into the work. The work revolves around protection, management, and monitoring of the terns to build the populations, enhance productivity, and evaluate our progress towards recovery. We spend most of our time monitoring nests of both tern species, from egg laying through chick fledging, but the work changes through the season, as described below:

**Early to mid-May:** Install boat moorings, colony fencing, and island grid-systems; vegetation clean-ups; nestbox set-up; Penikese camp set-up; study plot set-up.

**Mid- to late-May:** Mark and monitor tern nests; weigh eggs; trap terns; resight banded terns through spotting scopes; install productivity plot fencing; start data entry.

**Early- to mid-June:** island-wide tern censuses; monitor nests; band and weigh chicks; manage vegetation; data entry.

**Mid- to late-June:** weigh chicks; resight terns; start removing nestboxes; manage vegetation; data entry.

**Early- to mid-July:** take down productivity plot fencing; remove most nestboxes; take down Penikese camp; finalize data files; write report.



At all three sites, we also monitor nests of American Oystercatchers. We will do some surveys of small islands near Bird and Ram to census oystercatchers, terns, and Piping Plovers. At Penikese, there are some additional activities, such as camp upkeep, gull nest searching, gull census, and gull nest monitoring. Human disturbance is not much of a problem on these islands; however, we do encounter problems related to wildlife that compete with, or prey on, terns, and we attempt to minimize negative effects. Interns may be involved in gull/heron nest break-up and predator watches. Occasionally, targeted control of predatory wildlife may be conducted by licensed, experienced MassWildlife staff, so Interns should be very safety-conscious, willing to work around firearms, and willing to adhere to strict project protocols regarding firearms.

**Team, logistics**

We will have a mix of Interns and more experienced Managers working to protect, manage, and monitor terns on the three islands. **Interns will be an integral part of our team, participating in nearly every project activity.** Our total crew size is expected to be 5 – 7 people, plus Carolyn Mostello (the Project Leader). For safety reasons, we always maintain a minimum crew size of two when boating to, and working on, the islands. Carolyn will oversee the work on all the islands, work on the islands regularly (especially Bird/Ram), and communicate with staff frequently. The staff works as a team; there is little independent work. Good communication is critical on a project occurring on multiple sites with several personnel.

Some staff will spend most of their time at Bird/Ram and some mostly at Penikese, while others may rotate among the three sites more or less equally. Interns can expect to spend time at all three sites, provided that they are comfortable camping at Penikese (see below). Work schedules of Interns will be irregular, but will average to about 5 days/week. We staff Penikese full time and try to visit Bird and Ram 2 – 4 days/week each. Most work is conducted during daylight hours, but occasionally some nighttime work occurs. Staff can expect the workload to vary through the season, to work around the weather and the tides, to work on some weekends and holidays, and to have some very early mornings and long days. The month of June, once chicks start to hatch, is extremely busy, and all hands must be on deck. In July, some Interns may help write the end-of-season report and conduct late-season tasks at our office, located in Westborough, MA. Flexibility, patience, ability to deal with last-minute changes, and being comfortable in the outdoors are essential for all staff.

**Bird and Ram.** Bird and Ram are usually visited alternately, roughly on an every other day schedule, depending on team size. For travel to these nearshore islands, there are 2 boats docked on the mainland. We hope that one or more project staff can already safely operate motorboats, but Carolyn will strive to make sure that everyone gets training and experience in boat operation. The living situation for staff working on Bird/Ram is our mainland crew house in Wareham (at no charge).

**Penikese.** Because of Penikese’s distance from the mainland, staff may be on island for up to ~ 2 – 3 weeks at a time before getting some time off, but we may be able to accommodate shorter stays (TBD). Because of our reliance on another organization for transportation to the site, we still have not worked out all the details of logistics and scheduling for the upcoming season, but realize we won’t leave anyone stranded out there! The crew camps on the island and uses camping gear provided by MassWildlife. The set-up is a large canvas wall tent (12’ x 16’) for cooking and working, small personal tents for sleeping, propane cook stove, cooler for produce, etc. (Ice packs can be frozen at the School. If the School isn’t in session, you can probably store perishables there.) There is a limited amount of hot water and electricity available at the school (you can charge your cell phone and our project computer), but not at the campsite. All water must be carried from the School to the campsite, so you will get a workout! You can get cell phone reception. When staff comes off Penikese, they can stay at the mainland crew house in Wareham. Poison ivy is present on Penikese, so if you are highly allergic, this may not be the site for you. Penikese is the biggest and most biologically diverse of the islands, and it is quite beautiful. The field camp is comfortable for most people. However, very gregarious people and people that do not do well with small groups of people or in camping situations may prefer to spend more time at Bird/Ram.

*For additional information, see: <https://www.mass.gov/service-details/buzzards-bay-tern-restoration-project>*