Science & News from the Rhode Island Natural History Survey

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Bees of Rhode Island: Bumble Bees

By HOWARD S. GINSBERG and STEVEN R. ALM

Introduction

Bumble bees are members of the genus *Bombus*, a highly social group with about 250 species worldwide. They are found throughout the northern hemisphere, extending into the southern hemisphere only in the Americas (although they have been introduced elsewhere). Bumble bees are in the family Apidae, and are related to honey bees, sharing the morphological feature of pollen collecting baskets, or corbiculae, on the hind legs (Fig. 1, left). Bees without corbiculae carry pollen on hairs called scopae (Fig. 1, right).

Historically, 12 species of *Bombus* were known from Rhode Island, based on specimens in the URI collection and databases such as that of the American Museum of Natural History (Table 1). Recent samples (taken over the past 10 years) have found only 7 of these species, plus one additional species that had not been seen previously (Varkonyi et al 2025).

Bumble bee foraging

Bumble bees are broadly polyphagous in their foraging for nectar and pollen. They will collect resources from a wide variety of flower species, with some restrictions based on tongue length and floral structure. However, on individual foraging trips they tend to forage primarily on one flower species, establishing foraging paths called traplines, flying from one flower patch to the next. Heinrich (1979) called this a "majoring" and "minoring" system, where the bee would forage primarily from one species, occasionally sampling from other flower species along the route. When the major species started to decline in resource presentation, while one of the minor species was entering full bloom and presenting more nectar or pollen, the bee would "switch majors" and establish a new foraging path based on the new major species.

Bumble bees are capable of buzz pollination (Vallejo-Marin 2019) and are therefore efficient pollinators of flowers with tubular anthers, such as tomatoes, blueberries, and cranberries. The tubular anthers have distal pores, and a buzz pollinator lands on the flower, grasps floral parts (often with the mandibles), detaches its wings from its flight muscles and vibrates the flight muscles, causing pollen to puff out of the terminal pore of the anther. Many wild bees, including *Bombus* spp., are capable of buzz pollination, but honey bees are not. Therefore, bumble bees are more effective pollinators than honey bees of certain flowers, and colonies of *B. impatiens* are commercially available. Of course, pollination efficiency must be balanced against the relative size of each colony (typically < 100 for *Bombus*, compared to tens of thousands for honey bees).

A remarkable aspect of bumble bee biology, which is rare among invertebrates, is their ability to thermoregulate using the heat generated by their powerful flight muscles. Insects have an open circulatory system, where the blood (hemolymph) moves in the open body cavity (hemocoel) and is not confined to blood vessels (unlike the closed circulatory system of vertebrates). A dorsal aorta in the insect abdomen and thorax pumps hemolymph forward to the head, and the hemolymph then flows back in the hemocoel toward the

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Figure 1. Left Pollen packed in corbicula on the hind leg of bumble bee *Bombus griseocolis* (photo by Casey Johnson). Right: Pollen collected on scopal hairs on hind legs of sweat bee *Agapostemon virescens* (Family Halictidae) (photo by Steven Alm).

Table 1. Bumble bees of Rhode Island, identifying those species recorded historically and those recorded recently (i.e., within the last 10 years).

Scientific name	Common name	Historic	Recent
Bombus affinis	Rusty-patched bumble bee	X	
B. auricomus	Black and gold bumble bee		X
B. bimaculatus	Two-spotted bumble bee	X	X
B. citrinus	Lemon cuckoo bumble bee	X	
B. fervidus	Yellow bumble bee	X	X
B. griseocollis	Brown-belted bumble bee	X	X
B. impatiens	Common eastern bumble bee	X	X
B. pensylvanicus	American bumble bee	X	
B. perplexus	Confusing bumble bee	X	X
B. sandersoni	Sanderson bumble bee	X	X
B. ternarius	Tricolored bumble bee	X	
B. terricola	Yellow-banded bumble bee	X	
B. vagans	Half-black bumble bee	X	X

abdomen. When the hemolymph is in the thorax (the middle body section with wings and legs) it is heated by the flight muscles, and the bumble bee can control the flow of heated hemolymph back into the abdomen, thus regulating body temperature (Heinrich 2004).

Bumble bee life cycles

Bumble bees overwinter as reproductive females, or gynes, which had been inseminated the previous year. In spring these females seek nesting sites, typically holes in the

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President's Corner: Art & Natural History

Sarah Gaines, President, Board of Directors

I'm writing this in the middle of the largest snow event Rhode Island has enjoyed this year—drifts over a foot obscuring the landscape—redefining, reaccentuating, redrawing the contours of knobs and kettles at all scales (but the storm a month later made this one forgettable—Eds.). With the snow slowing down now, songbirds are busy storing up energy within their down-inflated profiles. We're hopeful the roads will be clear by tomorrow; our Annual Open House and Artists on Exhibition Art Show always seems to draw snowfall. More than 19 local artists have prepared works that highlight Rhode Island's biodiversity using a broad range of approaches and media including photography, watercolor, glass, fabric, wood, and written word. For those who didn't make the Open House event, the art will be displayed on the office walls over the coming year.

Art and Natural History have long held symbiotic relationships. As was common, Conrad Martens, ship artist on the HMS Beagle recorded in great detail the natural discoveries made by Charles Darwin, but primarily recorded the landscape and people encountered over two years of the expedition. Not only a tool of the past, art can also be an active element of scientific research: sketching was a critical element of my own education in field geology. Drawing has a way of honing attention and focusing a critical eye on the components and dynamics at work across a landscape. Once you start drawing from nature, it's as if a new level of seeing has been activated with which you observe your surroundings. Artists also take great inspiration from nature; we see many high-tech dynamic interplays between technology, design, and innovation.

RINHS has been seeking ways to expand this relationship, sharing ways of communicating and observing details while bringing different partners into our fold. We have a long partnership with the Nature Lab at the Rhode Island School of Design. Edna Lawrence, founder and namesake of the Nature Lab, was the recipient of our 2023 Posthumous Distinguished Naturalist Award, in recognition of her important contributions to inspire students to observe and understand nature through her collection of 25,000 natural history objects. Her goal in establishing the Lab was to "open students' eyes to the marvels of beauty in nature—of forms, space, color, texture, design and structure." (See pages 22–26 for profiles of our most recent Distinguished Naturalists.)

Our Art Team at Bioblitz is always one of the most energetic and eclectic teams. We've benefited from the work of audio podcasters to watercolor landscape artists to children printing mushroom spores. The Art Team is my preferred allegiance, since it gives open access to all the other teams—to ask questions like "What's the coolest thing you've found?" and "Can I draw it?!" Five minutes or an hour spent with something created by nature offers us the opportunity for close observation, for a sense of stillness and focus, which I experience nowhere else.

In 2025, RINHS lost a number of longtime supporters and advocates. The incredible celebration of Susan Killingbeck's life, in particular, provided me with an important lesson about the value of leaving your mark. Through poetry, prose, sketching, and knitting, Susan left a clear record of how she saw the world and her place in it. Join me in inspiration—even better with friends—to document the nature of Rhode Island through your preferred medium, perhaps gaining a better understanding or sharing important insights on nature—Rhode Island's or your own—in the process.

Rhode Island Bumble Bees (continued from p. 2)

ground such as abandoned rodent burrows, but some species will use hollow logs or trees, or even human-made structures such as wall voids. The gyne forages for pollen and nectar provisions and lays eggs that hatch in a few days. The larvae develop and pupate, with the first young female adults emerging after about a month. At this point, the young females are workers; they take on the work of nest maintenance, foraging, and provisioning of larvae, but they do not reproduce themselves, and the gyne is now a queen. The queen lays eggs, and the larvae are tended by the workers. The queen will exert her dominance over workers by pheromones and by physically shoving workers and eating any eggs they lay. Since workers have not mated, all of their eggs would develop into drones. All Hymenoptera (sawflies, bees, wasps, ants) are haplodiploid (fertilized eggs develop into females and unfertilized eggs develop into males). Larvae are fed either directly or through pollen stored in pockets on the sides of the wax cells. Some species also produce wax pots for nectar storage. Later in the season, males and gynes are produced, they mate and the inseminated gynes seek overwintering sites where they enter diapause. The workers and males die with the cold winter weather.

This life cycle has all the characteristics of true social, or eusocial, behavior: (1) reproductive division of labor (i.e., reproductive castes; reproductive queen and nonreproductive workers), (2) overlapping generations (the queen lives to see her offspring reach the adult stage), and (3) cooperative brood care. Most bee species are solitary, but eusocial behavior has evolved several times within the bees, and reaches highly complex forms in some of the corbiculate groups in the family Apidae, such as the bumble bees, honey bees, and the tropical stingless honey bees (Engel and Rasmussen 2021).

Some species of bumble bees are social parasites of other bumble bees. In the genus *Bombus*, these species are in the subgenus *Psithyrus*. They are sometimes called "cuckoo bees" because they parasitize other bee nests. The one species of *Bombus* (*Psithyrus*) known from Rhode Island, is *B. citrinus*, which is primarily a parasite of *B. vagans*, although it will sometimes parasitize other species. The *B. citrinus* life cycle involves inseminated gynes that enter colonies of the host species, and then kill or immobilize the host queen. The parasite queen then lays her own eggs, and the host workers feed and raise the *B. citrinus* larvae. This species was known historically from Rhode Island, but the last known specimens were seen in 2009 in Exeter, Rhode Island, and 2010 on Block Island. Since *B. citrinus* has no workers it forages relatively rarely, primarily before parasitizing a host nest, so it is less likely to be collected from flowers than the host species. The major host, *B. vagans*, is present but relatively uncommon in Rhode Island, so *B. citrinus* might also be present, even though it has not been detected in recent samples.

Bombus species in Rhode Island

Eight species of *Bombus* have been recorded in Rhode Island in recent years (Table 1). The three most abundant species are the common eastern bumble bee, *B. impatiens,* the brown-belted bumble bee, *B. griseocollis*, and the two-spotted bumble bee, *B, bimaculatus*. Of these, *B. impatiens* is by far the most common (Fig. 2). Bumble bee species are fairly easy to recognize with a little practice, even while they're foraging on flowers (although some species, such as *B. vagans* and *B. sandersoni*, can be difficult to distinguish), and excellent guides for identification of bumble bee species are available. One example is Colla et al. (2011), which is available in hard-copy, or it can be downloaded for free at: https://www.xerces.org/publications/identification-monitoring-guides/bumble-bees-of-eastern-united-states.

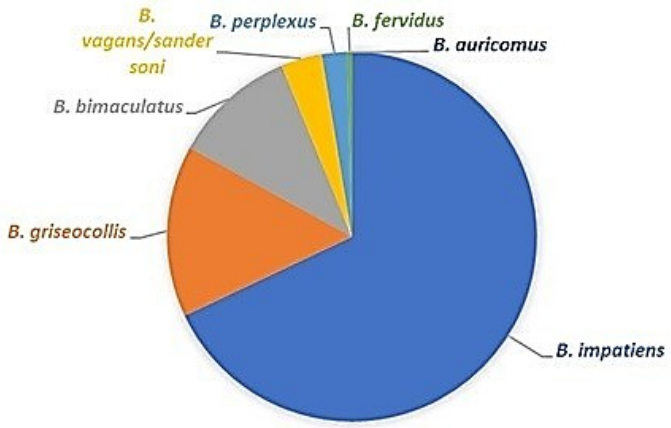

Figure 2. *Bombus* species recorded foraging on flowers and captured in traps at 111 sites in Rhode Island, 2019–2021 (n = 9,537; data from Varkonyi et al. 2025).

Some bumble bee species have been declining substantially across their ranges in recent years. Three of these species, *B. affinis*, *B. terricola*, and *B. pensylvanicus*, were previously found in Rhode Island, but have not been seen in recent samples. *Bombus affinis* was added to the federal endangered species list in 2017. The causes for these declines are only partially understood, but seem to involve factors such as habitat loss and fragmentation, pathogen spillover from managed bees (e.g., honey bees and commercial colonies of *B. impatiens*), pesticide applications, and climate change (Cameron and Sadd 2020). One species that was previously present in Rhode Island, *B. ternarius*, is a northern species, and is still highly abundant in Maine (Butler et al. 2021),

suggesting that climate change is a factor in the distributional shift of this species. The three most common Rhode Island species, *B. impatiens*, *B. griseocollis*, and *B. bimaculatus*, all display interesting features that are of importance to agriculture and to natural communities. One species that is less commonly collected than previously, and that deserves additional attention, is the yellow bumble bee, *B. fervidus*.

Figure 3. *Bombus impatiens*. Top: lateral view. Bottom: dorsal view (photos by Sam Droege).

Species of Special Interest in Rhode Island

The common eastern bumble bee, *B. impatiens* (Fig. 3), accounted for 68% of all bumble bee observations in Rhode Island during our 2019–2021 survey (including data from bees on flowers and from trap captures). *Bombus impatiens* is a generalist species (observed foraging on 212 plant species in Rhode Island alone), and its range and abundance are increasing (Colla et al. 2012, Jacobson et al. 2018). It is a medium tongue-length bumble bee, which allows it to obtain nectar from many more flowers than the long-tongued species. Important food plants for *B. impatiens* include *Cirsium, Eupatorium, Gelsemium, Impatiens, Malus, Pontederia, Rubus, Solidago, Symphyotrichum* (Asters), and *Trifolium* (Williams et al. 2014).

Bombus impatiens nests underground in abandoned rodent burrows. *Bombus citrinus*, the lemon cuckoo bumble bee, will sometimes parasitize the nests of *B. impatiens*. *Bombus impatiens* colonies can be purchased from Koppert and Biobest to pollinate crops grown in greenhouses (e.g., tomatoes), or to supplement wild pollinators for outdoor crops as well. This practice is controversial in that there is evidence that purchased bees may carry and transmit diseases to native bee populations.

Figure 4. *Bombus griseocollis*. Top: lateral view. Bottom: dorsal view (with pollen load) (photos by Sam Droege).

Bombus griseocollis, the brown-belted bumble bee (Fig. 4), accounted for 14% of the observations in our 2019–2021 survey. *Bombus griseocollis* has a close relationship to common milkweed and if you see a bumble bee on common milkweed, there is a good chance it is *B. griseocollis*. This species is able to tolerate the toxic cardenolides in milkweed nectar better than *B. impatiens* (Villalona et al. 2020). The conservation efforts to plant more milkweed for the monarch butterfly have probably helped to sustain *B. griseocollis* as well. Other food plants include other *Asclepias, Coronilla, Dalea, Echinacea, Lythrum, Melilotus, Monarda, Pontederia, Rudbeckia, Solidago, Trifolium, Verbena,* and *Vicia. Bombus griseocollis* is a short-tongued species that nests underground, on the surface of the ground, or above ground in structures. Males prefer high perches to search for mates and have even been found near the top of the Empire State Building (102 stories above ground level) (Williams et al. 2014)!

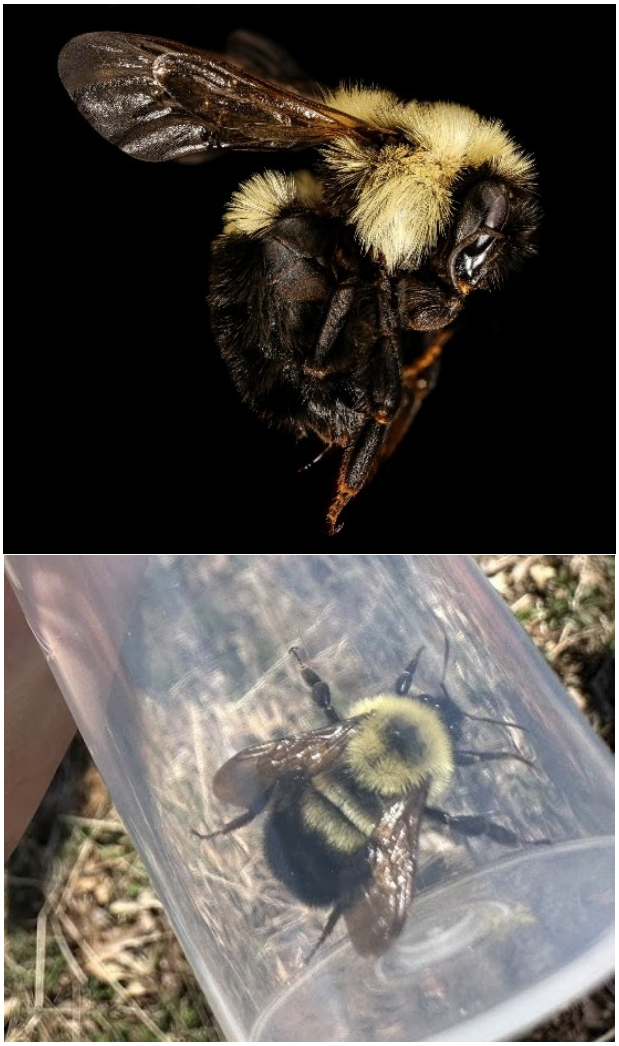

Figure 5. *Bombus bimaculatus*. Top: lateral view (photo by Sam Droege). Bottom: dorsal view (photo by Casey Johnson).

The two-spotted bumble bee, *B. bimaculatus* (Fig. 5) accounted for 11% of all *Bombus* spp. observations during our 2019–2021 Rhode Island bumble bee survey and is one of the most widespread and abundant species in the eastern US and adjacent southern Canada (Williams et al. 2014). It is a medium-tongued species that will forage on *Campanula, Lonicera, Monarda, Prunus, Rhododendron, Rosa, Rubus, Tilia, Trifolium, Vaccinium,* and *Vicia* (Williams et al. 2014). It was the third most common bee collected in our survey of bees pollinating highbush blueberries in Rhode Island (Scott et al. 2016). *Kalmia latifolia*, mountain laurel, is also a favorite of workers. We conducted a survey of the pollinators of wild and commercial cranberries in 2024. There was about a 50-50 split between the two dominant bumble bee pollinators (*B. impatiens* and *B. bimaculatus*) at the commercial bogs and at one of the wild sites. *Bombus impatiens* was the most prevalent at two other wild sites. *Bombus bimaculatus* is one of the earliest species to found nests in the spring and it completes nesting by the end of August. It is also a confirmed host for the lemon cuckoo bumble bee, *B. citrinus*.

Bombus fervidus, the yellow bumble bee (Fig. 6), is a long-tongued species and, along with many other long-tongued species, has declined considerably in recent years. The tongue of a bee is folded up under its head when not in use and is extended when sipping nectar. Think of a long-tongued species with a tongue like an elephant's trunk trying to obtain nectar from a flower with the nectar near the surface—too close for the long tongue to effectively obtain the nectar. A long-tongued bee would need to hover like a hummingbird to sip the nectar from a distance that would allow its tongue to be extended into the nectar. For this reason, long-tongued species tend to have relatively narrow floral preferences, often foraging on flowers with long corolla tubes, and ecological disruption by human activity tends to have more severe effects on long-tongued bumble bees than on species with shorter tongues (Bommarco et al. 2012). During our 3-year Rhode Island bumble bee survey, we saw or collected only 40 specimens of *B. fervidus*. This was 0.42% of the total of 9,537 bees identified. The International Union of Conservation of Nature's assessment of *B. fervidus* in 2014 was "vulnerable." Hatfield et al. (2015) noted "If this species' relative abundance continues to decline at the same rate, we project that the species will go extinct in the next 70–80 years." The conservation actions recommended the species' survival include:

- Restoration, creation, and preservation of native plants and natural grassland habitats.
- Restriction of harmful pesticide use on or near suitable habitat.

- Protection of species from diseases introduced by managed bees.

See our fact sheet on *Bombus fervidus* on the URI Bee Lab website https://web.uri.edu/beelab/ for native floral species to plant to help in the conservation of this species.

Figure 6. *Bombus fervidus*. Top: lateral view. Bottom: dorsal view (photos by Steven Alm).

Bombus fervidus nests on the surface, aboveground, and occasionally underground in abandoned mouse nests. It is one of the more aggressive species, probably as an adaptation to protect its more exposed nests (Williams et al. 2014). This species also has a curious habit of daubing intruder bumble bees in their nests (like cuckoo bees) with honey to drive them away (Plath 1934).

Increasing Bumble bee species in Rhode Island

The adage: "More flowers equal more bees" is only partially true. We certainly need flowers to maintain bee populations, and there would be value in re-establishing the connections between native plants and their co-evolved native pollinators. The Rhode Island Wild Plant Society is one of the main sources of native plants for Ecoregion 59 (which includes Rhode Island). The forage plants listed above for the four featured *Bombus* spp. are not all native plants. Check out Robert Gegear's website https://gegearlab.weebly.com/plant-list.html for more native plant options for bumble bees in Rhode Island. Our bumble bee survey revealed substantial bee diversity when we had placed traps at grower (e.g., farms and nurseries) and golf course locations. Growers and other landowners could enhance their native bee populations with wildflower plantings, possibly enhancing crop pollination. The Natural Resources Conservation Service (NRCS) of the USDA has programs to assist landowners to offset the cost of seeds to create pollinator habitat.

Another part of the equation for increasing bumble bee populations is increasing nesting sites. The URI Bee Lab has been researching the use of irrigation boxes to attract nest-seeking queens to provide secure nesting sites. This research is based on both our own experiences and a report from researchers at the University of Wyoming, where they inspected over 100 irrigation boxes on the university campus and found that dozens of boxes had at least one dead bumble bee queen, and several contained numerous dead queens. The queens were able to enter the boxes but not exit. Our solution is to turn these attractive ecological traps into secure nesting sites with easy exits. Two recent studies suggest that irrigation boxes could be made attractive as nesting sites. One, by researchers at Simon Fraser University in British Columbia, showed a strong attraction of bumble bee queens to establish nest sites where the nests contained the odor of house mice (likely related to the use of abandoned rodent burrows as bumble bee nests). Another study showed that commercial bumble bee nest boxes were acting as ecological traps by subverting the natural nest usurpation behavior of wild queens, suggesting that odors associated with *Bombus* nests were attractive to gynes. We are working to identify the volatiles coming from commercial bumble bee boxes to add to the irrigation boxes to attract queens to secure nest sites.

Conclusions

Everyone recognizes bumble bees. Their large sizes, modest numbers of species, and bright diagnostic color patterns make them suitable subjects for ecological field studies, including citizen science projects. Of course, they can deliver a substantial sting, so caution must be taken (in the aculeate Hymenoptera, which includes bees, wasps, and ants, the sting apparatus is modified from an ovipositor, so only females can sting). Given the importance of bumble bees as pollinators of wild plants and several agricultural crops, conservation has become a priority. The rapid declines of selected species in the past few decades (especially *B. affinis* and *B. terricola*) are of particular concern. Enormous environmental changes in recent history, including introductions of new species (including pathogens) due to global transportation, dramatic modifications and changing distributions of habitats, extensive use of pesticides, and changing climate patterns, make it difficult to discern the primary factors associated with these declines. Continued research, with the help of observations from citizen naturalists, can lead to a deeper understanding of the factors that influence populations and faunistic trends among bumble bees.

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Howard Ginsberg *retired from the U.S. Geological Survey, Eastern Ecological Science Center, Rhode Island Field Station at URI, and is a former member of the RINHS Board of Directors. He is currently a Scientist Emeritus, and he studies the ecology of disease vectors, such as ticks and mosquitoes, as well as the foraging ecology and faunistics of wild bees.* ***Steven Alm*** *is a Professor in the Department of Plant Sciences and Entomology at URI. He studies the natural history, foraging ecology, and faunistics of wild bees, as well as the biology and management of honey bee colonies.*

Marine Mammals of Rhode Island: Six Whales You've Never Heard Of Part 2

By ROBERT D. KENNEY

[continued from the Fall 2025 issue]

To recap—six of the 24 currently known species of beaked whales in the world are known from the North Atlantic, and all six have occurred in the area off southern New England (Fig. 1):

- Northern bottlenose whale, *Hyperoodon ampullatus*
- Cuvier's beaked whale, *Ziphius cavirostris*
- Blainville's beaked whale, *Mesoplodon densirostris*
- Gervais' beaked whale, *Mesoplodon europaeus*
- Sowerby's beaked whale, *Mesoplodon bidens*
- True's beaked whale, *Mesoplodon mirus*

All beaked whales are deep-water residents and none really occur in Rhode Island waters, but they reside along the outer shelf south of us, and are probably more common in our region than we recognize simply because they are difficult to identify in the field.

More Natural history

Reproduction in *Hyperoodon* is the best known of the North Atlantic ziphiids from data collected during 20th century commercial whaling (Mead 1989b). Sexual maturity in females occurs at a minimum length of 6.0 m and average length and age of 6.9 m and 11 years. In males the minimum length at maturity is 7.3 m, and the averages are 7.5 m and 7–11 years. Gestation lasts about 12 months, and lactation lasts at least 1 year and is possibly prolonged. Calves average 3.5 m at birth. The mean calving interval is 2 years, although some females have been observed accompanied by newborns and yearlings simultaneously.

Data from Japanese Pacific whaling indicated mean lengths at maturity for *Ziphius* as 5.8 m in females and 5.5 m in males (Heyning 1989). The data for females may have been biased by whalers targeting larger animals, since a 5.1-m pregnant female stranded in Florida. Calves average 2.7 m at birth. Reproductive data for *Mesoplodon* spp. are extremely sparse (Mead 1989a). One stranded female *M. densirostris* was observed with 9 annual growth layers in the teeth and one corpus albicans (ovulation scar) in an ovary, indicating recent sexual maturity.

Given that observations of living animals are rare and that most species seem to actively avoid close approaches by vessels, the behavior of most beaked whale species is very poorly known (Heyning 1989, Mead 1989a). Adult male beaked whales often bear multiple scars that match the spacing of the tusks in that species, indicating that the scars are inflicted during aggressive encounters between males (Mead 1989a).

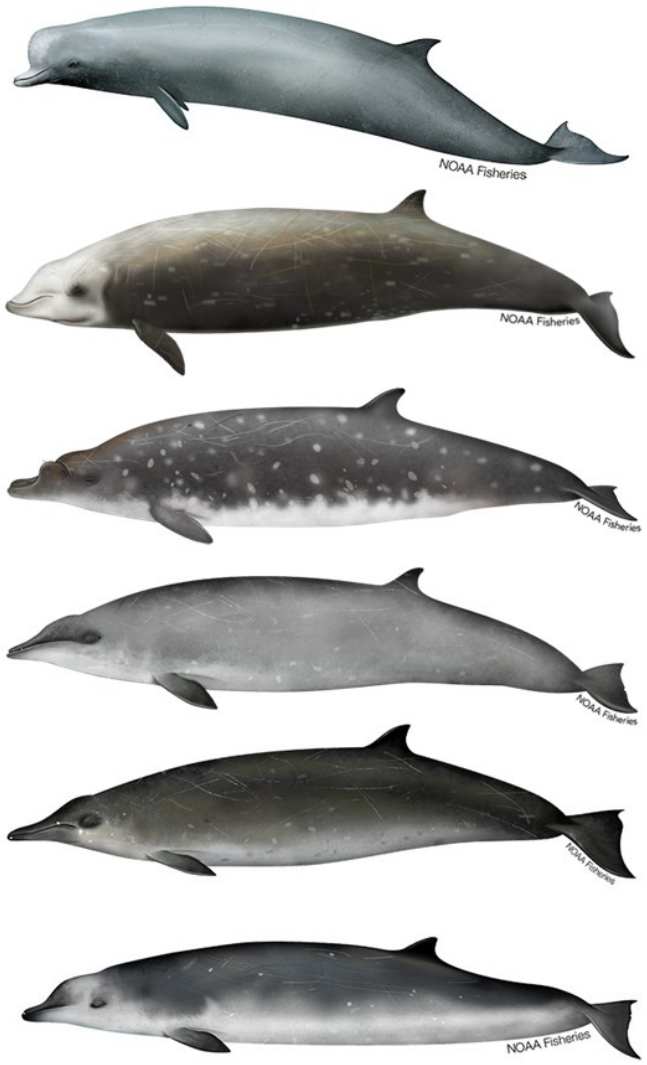

Figure 1. The six species of beaked whales that occur off southern New England (not to scale). Top to bottom: Northern bottlenose whale, Cuvier's beaked whale, Blainville's beaked whale, Gervais' beaked whale, Sowerby's beaked whale, and True's beaked whale (from National Marine Fisheries Service online species profiles, public domain).

Northern bottlenose whales are usually encountered in small groups of up to 4 whales (Mead 1989b), but short-lived aggregations of up to 20 animals are observed. Associations between adult females tend to be short-lived, but some male associations persist for years, suggesting a fission-fusion social structure with male coalitions (Gowans et al. 2001). Cuvier's beaked whales are typically observed in groups of 1–7 animals, with most groups of 4 or fewer (Heyning 1989). *Mesoplodon* spp. tend to occur in small groups (1–6 whales, usually 2 or 3) of mixed large and small animals and probably have a social system like many other toothed whales (Mead 1989a). Groups at the surface tend to stay tightly clustered, no more than a body length or two apart.

All beaked whales are capable of long and deep dives. Northern bottlenose whales typically spend 10 minutes or more on the surface before dives that may last 1–2 hours. The median dive depth is 1,000 m, and they are likely diving to the bottom for foraging (Hooker and Baird 1999). Heyning (1989) reported that *Ziphius* dives were generally 20–40 minutes, but more recent studies show them to be the record holders for both dive duration (222 minutes; Garcia de Jesus 2020) and depth (2,992 m; Schorr et al. 2014). *Mesoplodon* spp. dives are typically 20 to over 45 minutes, with groups of animals generally surfacing and diving simultaneously (Pitman 2017). Beaked whales' use of echolocation during foraging dives is similar to that in sperm whales, with regular clicks produced continuously at depth and short series of closely spaced clicks ("buzzes") when closing in on targeted prey items (Johnson et al. 2004).

Historical occurrence

The only documented historical records of northern bottlenose whale in southern New England were in Rhode Island in 1867—an 8.2-m animal was killed off Newport in February and a second was seen but escaped (sketches made from photos taken at the time were published by Scammon and Cope 1869; Fig. 2). This was the southernmost documented occurrence for the species in the western North Atlantic (Mead 1989b) until 1981 (see Recent occurrence below). Connor (1971) concluded that all other published reports for southern New England were in error. For example, Goodwin (1935) wrote "Linsley (1842) reported a whale of this species at Stonington, Conn."—mistaking Linsley's account of a minke whale (as "*Rorqualus costatus* [sic] Dekay, Beaked Whale") for *Balaena rostrata*, a junior synonym for bottlenose whale that was in common use at the time. Waters and Rivard (1962) perpetuated Goodwin's error, saying that bottlenose whales had been "recorded from the Gulf of Maine to Long Island Sound," but they included no specific records from Massachusetts (their own focus).

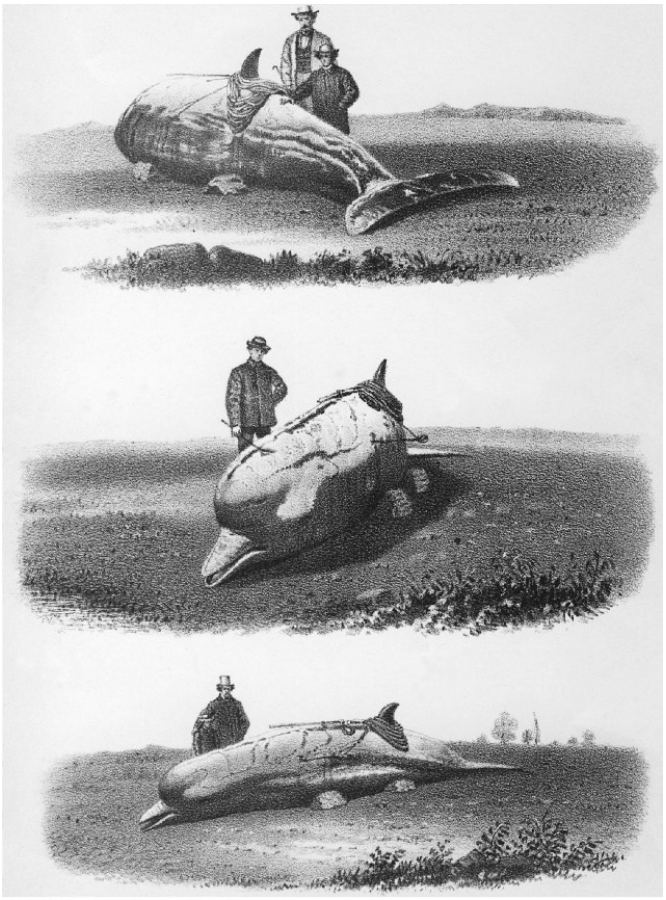

Figure 2. Sketches of the northern bottlenose whale killed at Newport in 1867, drawn from contemporary photographs (Plate 1 from Scammon and Cope 1869, out of copyright).

There are two historical stranding records for Cuvier's beaked whale in Rhode Island, both described in Cronan and Brooks (1968). A 564-cm animal stranded in Newport in October 1901. A 580-cm, 2,535-kg animal stranded alive in Newport on 13 March 1961 and died the next day. The photo in Cronan and Brooks shows visible teeth, so it was an adult male. There were no historical stranding records in eastern Long Island, but there were several farther west and others in New Jersey. Waters and Rivard (1962) wrote that there had been many strandings over the years in Massachusetts, mainly in spring, and reported three recent records—two in Falmouth in March 1958 and one on Nauset Beach in August 1961, killed by a ship collision.

There are no historical stranding records for any of the *Mesoplodon* species in Rhode Island, and few in southern New England. There is one record of Blainville's beaked whale in eastern Long Island, on 12 May 1925 in Southampton. There was one stranding of True's beaked whale on Mason's Island in Mystic, Connecticut on 19 November 1937, still the only Connecticut occurrence for any beaked whale. There are multiple historical records of Blainville's,

Gervais', and True's beaked whales in western Long Island and New Jersey. Goodwin (1935) suggested that a stranding at Southampton, New York was probably a Sowerby's but gave no evidence or even a date. Waters and Rivard (1962) reported that Blainville's, Sowerby's, and True's beaked whales were all known from strandings in Massachusetts.

Figure 3. Stranded Cuvier's beaked whale in Newfoundland. Note the absence of a long beak and the characteristic linear, often paired, scars (Wikimedia Commons, CC-BY-2.0, original source was https://www.flickr.com/photos/68069539@N07/28740971527/).

Recent occurrence

The general pattern for beaked whales in or nearby Rhode Island is strandings on the beaches (Fig. 3) and sightings at the shelf break and farther offshore (e.g., see Fig. 3 in part 1 in the Fall 2025 issue), with a few scattered occurrences in between. Most records that are identified to species are strandings; conversely, very few sightings were identified to species until quite recently. The descriptions below are based on records from the Cetacean and Turtle Assessment Program (CETAP 1982), subsequent sightings in the North Atlantic Right Whale Consortium database, maps in the NMFS SARs, and 1991–2004 stranding records for New York to Massachusetts provided by Ainsley Smith, the regional stranding coordinator at the NMFS Greater Atlantic Regional Fisheries Office in Gloucester, Massachusetts.

Northern bottlenose whale: A CETAP survey sighted two animals near the shelf break east of Cape May, New Jersey in June 1981 and another at the shelf break south of Nova Scotia in 1980. NMFS surveys between 1993 and 2007 made sightings far offshore south of Georges Bank and one near the shelf break off the Chesapeake—even farther south than the 1981 CETAP sighting. There have been no recent strandings in southern New England.

Cuvier's beaked whale: Between the CETAP surveys in 1979–1981 and the NMFS surveys in 1995–2021, sightings were relatively common beyond the shelf break between the Mid-Atlantic US and southern Nova Scotia. There was one sighting of a single Cuvier's beaked whale from a whale-watching boat in August 1986 in relatively shallow water southeast of Montauk Point. There have been three recent strandings in southern New England. In October 1988, one animal stranded on marshy Meadow Island in the bay behind Jones Beach Island in Hempstead, New York. A 570-cm adult male washed up on Hungry Point in Southold, New York on 20 February 2014. No cause of death (COD) could be determined (the necropsy was 9 days after the stranding), although it did have a few broken bones and a heavy parasite load. A 460-cm adult female stranded alive on Long Beach, Hempstead, New York on 20 October 2015; it was euthanized on site.

Blainville's beaked whale: There were no sightings identified to any *Mesoplodon* species during CETAP. NMFS surveys have made just a handful of Blainville's sightings far offshore between Nova Scotia and the Carolinas. A 420-cm, 781-kg Blainville's live-stranded at East Hampton, New York on 14 February 1986. It died soon after stranding. In March 1991, a 404-cm female Blainville's beaked whale stranded just west of the Quonochontaug Breachway in Charlestown, Rhode Island. It was lactating, but there was no sign of the calf. A severely emaciated 487-cm adult male stranded at Coney Island, New York on 10 September 2005. No COD was determined for any of these.

Gervais' beaked whale: NMFS surveys have made a moderate number of sightings offshore from the US Mid-Atlantic to Georges Bank. A stranding on Fishers Island (part of New York, but physically closer to Connecticut than to Long Island) on 17 July 1999 was originally identified as Sowerby's beaked whale and reported to the stranding network. It would have been the first documented occurrence of the species near Rhode Island and the only record for New York. Subsequently, the skull was cleaned and photographs were sent to James G. Mead at the Smithsonian, who

identified it as Gervais' beaked whale (R. Nawochik, Mystic Aquarium, pers. comm.), the sole stranding record of that species in our region. There was one more that came close—on the north side of Cape Cod instead of the south. A 384-cm male came alive into the Sandwich Marina (just inside the north end of the Cape Cod Canal) on 19 September 1997 and died at the site.

Sowerby's beaked whale: This is the only *Mesoplodon* species where there is no sighting map included in the NMFS SAR, and it has the lowest estimated abundance (see Distribution and Status, above). Nevertheless, Sowerby's was the most common beaked whale taken incidentally by the swordfish driftnet fishery, which operated off the southern edge of Georges Bank. There are no recorded strandings in southern New England, although there are two recent records for Massachusetts north of Cape Cod (Barnstable and Plymouth). There was a stranding of interest on Block Island on 22 February 2007. It was identified at first by a local volunteer as a "dolphin," but photos were sent to Mystic Aquarium and then eventually forwarded to the Smithsonian. Dee Allen at the Smithsonian identified it as definitely a *Mesoplodon* and most likely a Sowerby's beaked whale, but in the interim a storm washed the carcass back out to sea so no specimen could be collected to document the identification with DNA or a skull. The stranding is recorded in the NMFS data as unidentified *Mesoplodon*.

True's beaked whale: The map in the NMFS SAR shows only a few sightings offshore of Georges Bank and the Nova Scotian Shelf. There are no other identified sightings in our region. At the time the O-SAMP report was prepared there was only one recent stranding of a True's beaked whale in or near Rhode Island. A badly decomposed 463-cm carcass washed up on 2 August 1983 at Sand Hill Cove in Narragansett. There have been seven additional strandings since, one in Rhode Island and the rest in New York. On 9 August 2007 a 474-cm adult male live-stranded on the Fire Island National Seashore, died on site, and washed back out to sea. It came ashore again briefly on the 10th but washed back out before responders arrived. It came ashore for the third time on the 11th and was secured for a necropsy the next day. A 287-cm adult female stranded in Amagansett on 15 July 2008. The Rhode Island stranding was on 18 December 2013 near the Cliff Walk in Newport, when a 183-cm male washed ashore. A mother and calf stranded separately in New York in January 2014. A 475-cm emaciated adult female stranded alive in Water Mill on the 5th and died on site. The following day a dead 268-cm male calf stranded 3 km to the east in Bridgehampton; it was noted as emaciated and suffering from cestodiasis (tapeworm infestation). A 248-cm female stranded in Southampton on 30 June 2015. Finally, a 354-cm male stranded in Bridgehampton on 19 November 2015; it had a fractured mandible that was recorded as "human interaction."

Conclusion

From the variety of historical and recent information, the general conclusion would be that our area is situated well south of the normal range of northern bottlenose whales, near the southwestern edge of the range of Sowerby's beaked whale, near the northeastern edge of the range of Gervais' beaked whale, and well within the ranges of Cuvier's, Blainville's, and True's beaked whales.

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Dr. Bob Kenney *is an Emeritus Marine Research Scientist at the URI Graduate School of Oceanography, a member of the RINHS Board of Directors, and a co-editor of* Rhode Island Naturalist.

Executive Director's Journal: Do You Have "Invasive-osis"?

By DAVID W. GREGG

There is a sort of Rorschach test for naturalists. If you go for a walk, do you see a paradise of wildflowers, pollinators, birds, and natural communities with a few weeds thrown in? Or do you see a nightmare landscape of invasives, weeds, and other unfolding biological catastrophes? If you're in the second group, you may have contracted "invasive-osis." Your response to this test is also a measure of the maturity

of your naturalist sensibilities. Often, a youthful naturalist's eyes are first opened through exploration of one subject sufficiently to realize it was deeper than he or she thought, and then looking around, they saw other depths of details everywhere. Later, you learn about more things, and eventually one of those things is invasives, at which point your world is ruined and no one can be around you. You can't walk 10 feet from your door (or even look out a window) without stopping to pull up swallowwort, muttering about ignorant neighbors, or lecturing your walking companion on ecology, international commerce, and the folly of man. With further growth, though, you realize "invasive awareness" might be ruining your whole experience of the natural world (if not your friendships and marriage) and you begin to develop a more mature perspective: you learn to walk past a mulch bed sprouting knotweed without excoriating the property owner in a social media post.

One of the many ways in which people with invasive-osis are annoying is that they correct you for calling a native plant like poison ivy "invasive." So that you don't traumatize a friend with the condition, then, what is an invasive species and why isn't poison ivy invasive? An invasive species is a species living and reproducing outside its native range, in non-anthropogenic habitats, having a net negative effect on native organisms, natural communities, economic activity, or human health. The U.S. Department of the Interior's Invasive Species Advisory Committee issued a 2006 white paper that framed the definition by saying to be an invasive, a species must overcome five barriers or pass five tests: geographical barrier, survival, establishment, dispersal or spread, and (net) harm (ISAC 2006).

Consider poison ivy (*Toxicodendron radicans*), dawn redwood (*Metasequoia glyptostroboides*), common lilac (*Syringa vulgaris*), black locust (*Robinia pseudoacacia*), and water chestnut (*Trapa natans*) as examples. Poison ivy is native; it did not have to overcome a geographical barrier to get here, so it is not invasive. Poison ivy may be "weedy" but it is not invasive. Nor is catbriar or green briar (*Smilax rotundifolia*), which is native. In fact, both poison ivy and catbriar have a wealth of ecological values and even host their own native insects that feed on nothing else.

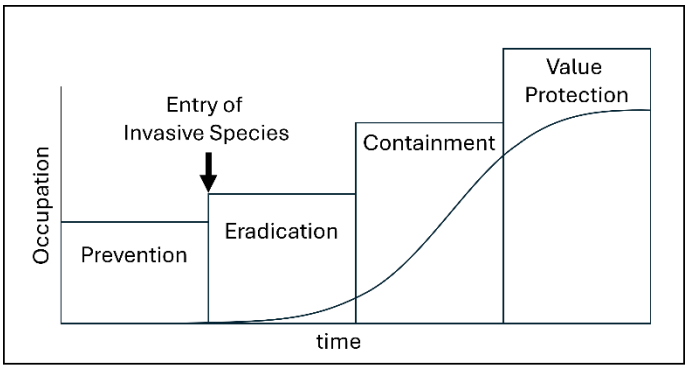
Dawn redwood, native to China, can survive in Rhode Island, so it passes the first two ISAC tests, but it rarely if ever sets viable seed here, so it is not invasive. Common lilac is native to eastern Europe, survives here, and can gradually spread out from an original plant, but it is not aggressive and does not disperse around the landscape without human intervention, so it is not invasive. Black locust is an interesting example because it is native to North America, with an original range in the southern Appalachians; however, it is not native to Rhode Island. It can survive and reproduce here, and in some circumstances it can spread aggressively, so many consider it invasive. Nonetheless, it has many valuable uses related to its tough, dense, and rot-resistant wood, and there are circumstances where it does not spread outside human managed areas or in a way that is hard to control, so some make the case that its presence is not a net negative and it should not be considered invasive. Water chestnut, on the other hand, blows right through all five barriers and is clearly invasive. Different response strategies coincide with preventing species from crossing each of the ISAC's five barriers: preventing introduction, survival, reproduction, spread, and harm. As one would expect, the cost-benefit equation gets progressively worse the further along the curve one waits to take action.

Larry and Rachel Orlando pulling water chestnut in an event organized by the Survey at Chapman Pond in Westerly in 2010 (photo by the author).

The cost of invasives—including losses to ecology, economics, and quality of life—is staggering. Invasive species are the third greatest impairment to our ecosystems after climate change and land development. Invasive species are the cause of or a major contributor to 60% of recorded global animal and plant extinctions (Roy et al. 2023: p. 20). A 2019 intergovernmental report put the annual global economic cost at $423 billion (Roy et al. 2023: p. 22) and Crystal-Ornelas et al. (2021) put the cost in North America at more than $26 billion a year (2021). A study limited only to the most reliably quantified costs put the bill in the U.S. at $21 billion (Fantle-Lepczyk et al. 2022). Costs include everything from tracking down murder hornets to cleaning zebra mussels out of power plants and fixing pavement torn up by bamboo to increased pesticide use in crops. Figures specific to Rhode Island are hard to identify, but just the Natural

History Survey's Forest Health Works Project, between 2009 and 2012, spent over $673,000 to manage invasive plants and encourage the use of native plants instead.

hence not enforceable, almost 14 years later.



Generalized Invasives Curve: relating the spread of an invasive plant (the occupation curve) versus the difficulty and costs of response at each phase,

Rhode Island is one of the only states in the country, and the only one in the Northeast, to have no comprehensive, direct regulation of invasive species. Nonetheless, there are several legal hooks that provide at least some statutory control over invasive species. The most explicit law is RIGL §20-1-26, which says, "No person shall import, transport, disperse, distribute, introduce, sell, purchase, or possess in the state any species of non-native (exotic) freshwater invasive aquatic plants, as defined by the director." This was passed by the General Assembly in 2012. Unfortunately, the implementing regulations remain in unapproved, draft form, and Rhode Island does regulate invasives in certain, limited circumstances. For example, regulations on the purity of compost, soil amendments, and seeds all require steps to prevent the inclusion of invasives in those products. The Department of Environmental Management's Division of Agriculture runs a nursery inspection program that specifically targets invasive and potentially invasive plant pests, pathogens, and noxious weeds. The state veterinarian has broad, statutory authority to regulate the possession or sale of invasive vertebrates (rodents, fish, snakes, and birds), and the state apiary inspector has the authority to inspect and manage domestic bees to prevent the accidental importation of invasive pests and pathogens. Rhode Island exerts a lot of control . . . and shows leadership . . . through the Department of Transportation's standards manual which requires that plantings, soil, and other bulk materials used in RIDOT projects be free of invasives. Finally, wetland regulations under jurisdiction of both CRMC and RIDEM provide exemptions or other pathways that permit management of invasives.

A good deal of coordination happens because many of these functions fall under the Division of Agriculture and Forest Environment; nonetheless, the absence of comprehensive authority is clear. For example, although the nursery inspector can mandate the removal of weeds from a garden center's potted barberry, he or she cannot prevent the nursery from selling or a landscaper or homeowner from installing the barberry itself.

This year, the General Assembly is considering a comprehensive invasive plant bill. The bill, if passed, would ban the distribution of plants on a list made through a subsequent regulatory process. It is simple and straightforward in structure, mimics the invasive aquatic plant statute that is already law, and has an active group of voters advocating for it, so it should have a good chance for passage. Another factor in its favor is the way it puts off to a later, regulatory phase the making of the invasive species list itself. Whenever the basic idea of a bill is pretty much common sense, people opposed to it for political reasons need to find some detail to justify voting against it, and in this case trying to build a list of invasives into the statute itself would create a kaleidoscope of potential excuses for "no" votes. "This plant isn't really invasive; that plant has too high a commercial value; this plant grew outside my Aunt Sadie's house for years and never caused any problems!" With a regulatory process still to come, a waffling opponent might vote "yes" on the bill but expect to have more influence on the list-making phase.

Youth Conservation League participants really got into their work clearing invasives as part of the Forest Health Works Project in 2010 (photo by James Barnes).

For proponents of invasive species regulation, it is important to keep pressure on representatives and senators so the bill gets out of committee and gets an affirmative floor vote, but it is also critical to stay engaged throughout the regulation-writing process that follows. The places where good policy

can fall down only multiply once the publicly visible law-making stage is over. The regulations could leave key species off the invasive list or weaknesses could be written into the monitoring and enforcement procedures, and the best intended regulations will have little effect if RIDEM does not have the resources—budget and high quality staffing—to implement them.

The Rhode Island Natural History Survey is a non-advocacy organization. This long-standing policy comes out of the Survey's science focus. We want all parties to feel comfortable sharing information with the Survey knowing we are not going to manipulate it in support of a particular policy position, and we want all parties to feel comfortable coming to the Survey for information knowing they will get the best we have regardless of their policy positions. Finally, if the Survey remains truly guided by the scientific perspective, the facts will tell us what is best. Of course, in this age, we are not so naïve as to believe that facts advocate for themselves. It is the case, however, that there are already well-established, highly visible advocacy organizations such as Audubon Society, Save the Bay, The Nature Conservancy, or the R.I. Land Trust Council, and they need to be supported for the great work they do on all our behalves. But besides the Survey, there are few other independent, scientific voices dealing with biodiversity. Rhode Island needs the best pro-biodiversity science organization possible. We believe the Natural History Survey's non-advocacy policy is important to achieve that, but also that being a strong source of biodiversity science, we should collaborate with all of these organizations every day in numerous ways . . . and we do! The invasive plant issue is a great example of how we all need to work together to get the best result for Rhode Island.

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David Gregg *has been the Executive Director for over 20 years, was a Board member for two years before that.*

Musings of a Would-be Naturalist

By KIMBERLEY GAFFETT

First, of course, I want to thank the Rhode Island Natural History Survey for the Distinguished Naturalist award. I am honored by your consideration. Many thanks also to all of the friends, family, friends, and colleagues from Block Island and from a good many places who came from far and wide to share with me at the awards event in November.

Why "musings" and why "would-be"?

I'm not accustomed to speeches, lectures, or formal essays; my ways of thought and sharing information (especially onnature topics) is more by stream of consciousness; connecting tangential thoughts; maybe hoping to elicit wonder, curiosity, amazement/astonishment, or surprise; making connections—some obvious, some not. In a word: musings.

I was surprised by the nomination. Even though my current job title includes "naturalist," I'm not sure I've ever felt like a bona fide naturalist—although I have, for a long time, aspired to that and would like to be thought of as a naturalist. It's a nice catch-all descriptor. It doesn't pin you down as an ornithologist, or teacher, or researcher, or any individual thing. You don't choose one thing, and be really good at it; you can dabble at many things and be less than perfect at all.

I first used the term naturalist to describe myself back in the mid-1980s when filling out an income tax form and had to list occupation. At that time I didn't actually have an occupation; I lived on Block Island and I had a lot of part-time jobs: hardware store clerk, community action worker, school bus driver, substitute teacher, bird bander helper, aide to DEM summer nature walk leaders, field assistant on a URI-led peat study, co-manager of a co-op art gallery called The Barn, letterpress printer, and more. None of the occupations listed in the directions for filling out the IRS 1040 form fit, so I chose "other" and wrote in "naturalist." But I really

wasn't sure what a naturalist was, or whether I did—or ever would—have the qualifications for that job title. All these years later I still use "naturalist" when filing my tax forms. And, for most of these last 40 years I have never really been sure if I was a bona fide naturalist, or if I was just someone who likes and is fascinated by nature. Thus, a "would-be" naturalist.

Once I was alerted that I was to receive this honor, and after I waded through the thoughts of: "there has been a mistake," "there are others who are more obviously naturalists," "not me, a would-be naturalist,, and after attempting to convince David Gregg that there was still time to make another selection (obviously I failed), I started thinking that I better find out what a naturalist is. And, by the way, what is a Natural History Survey?

I am of a certain age and my mother was a librarian, so of course I started with a book—*The Great Naturalists*, edited by Robert Huxley (Museum of Natural History, London, 2007). This is a really interesting book, with short bios and accomplishments of all the great naturalists from Aristotle to Charles Darwin, Alfred Wallace, and Asa Gray. But, it did not really help with the question "what is a naturalist"? The synopsis of each naturalist seemed to describe the pastime of either a wealthy person with leisure time and resources for exploration and expeditions, or the pastime of a person with limited means who was willing to sacrifice income for time afield. At best—an observant person who discovered things: but, not quite right.

Then I tried the internet, and I got this AI response: "A naturalist is a person who studies the natural world, often by observing and interacting with plants, animals, and their environments directly. This can involve a wide range of activities, from field observation and collecting specimens to educating the public and protecting habitats. A naturalist may have a formal scientific background, like Charles Darwin, or be an enthusiast who develops a deep understanding and appreciation for nature." OK, I can see that as a good description of a naturalist—not exactly or necessarily a job but also a way of being, an avocation. I can even see that as describing how I interact with nature and the environment.

When I tell people that I am a member of RINHS and have been for 30 years, or that I was going off island to a RINHS Board meeting or event (conference, lecture, BioBlitz, field trip, etc.), I would inevitably be trying to explain what a/the Natural History Survey is and does. It seems that a Natural History Survey is not an immediately obvious thing. To parse out the moniker: Rhode Island (obvious). Natural (pretty obvious). Natural History (a little more problematic; what is natural history?). The key is in going back to the root of the word "history," which comes from the Greek word *Historia*, which means "inquiry" or "knowledge from inquiry." In turn, the Greek *Historia* is rooted in *histōr*, meaning "witness" or "expert,"

OK, I got it. Natural history is knowledge of nature by being inquisitive and by direct observation.

Then there is the word "Survey"—a somewhat awkward word because in these days you are most likely to think of being surveyed about political opinions, or your satisfaction at a medical appointment, or you think of a land surveyor who is describing land by metes and bounds. And finally, our intended meaning: to survey an area to see what is there.

Rhode Island Natural History Survey (RINHS) is both a noun and a verb. As an entity it is the surveyor, but also the Natural History Survey functions to actively oversee; to look closely; to collect data and observations. I.e., the RINHS (organization) actively surveys the state of Rhode Island for natural history. The duality of RINHS as both an entity and an action, is well described by its Mission Statement articulated on the RINHS website: "To promote ecosystem resilience, the Rhode Island Natural History

Survey collects, organizes, and disseminates information on Rhode Island's biodiversity and ecosystems. We engage curious observers of all ages—professionals and amateurs, scientists and artists—in field-based experiences that build connections to science, conservation, and the natural world." So, a natural history survey, as a group, would be one that looks, observes, tracks, and documents all natural things and systems/processes within a defined area—in this case Rhode Island

RINHS is important beyond its mission statement. Yes, it collects natural history information and makes it available to be shared, but more importantly this sharing is not just on-line or in a report or spreadsheet. RINHS creates in-person events (like Distinguished Naturalist awards luncheons) where like-minded people can gather to learn, and to be naturalist-geeks together. Part of the reason I have been a 30-year member is because of these human opportunities—conferences, and lectures, and BioBlitzes, and field trips—all of which allow for a synergy to develop, beyond a two-dimensional exchange of data.

My Inspirations

Sir Isaac Newton said: "If I have seen further it is by standing on the shoulders of giants." In more modern and personal parlance: where I have excelled it is because I stand on the shoulders of those who came before me. The shoulders on which I stand are those of both direct supporters and mentors, and those who have inspired me from the distance of time and space. Certainly all of my bird work and my conservation ethic grew and developed from standing on the shoulders of several Block Island people.

Elise Lapham (1914–2013) taught me everything about bird banding and more. She started the bird banding station at Clay Head in 1967 at age 55. Her Block Island conservation work is most evident at Clay Head and as a founding board member of Block Island Conservancy. Over thirty years of friendship, and mentorship (she would not have called it that), Elise taught me so much. Not just which bird is which, but also patience, the importance of open space, and the value of welcoming visitors to the station, which she saw as an opportunity. If they learned about bird needs there, they could transfer that newfound interest in birds and what habitat needs they require elsewhere. Elise often said "once I put a bird in your hand, you are never the same.".

Elise Lapham was taught by Elise Dickerson (1910–1969). Although I didn't known Elise Dickerson personally, I stand on her shoulders too. I also did not know Elizabeth Dickens (1877–1964, the "Bird Lady of Block Island") personally—but I have been a student of her life, bird collection, and journals recording 50 years of daily observations. Elizabeth Dickens taught generations of students and Block Islanders bird study at the Block Island School; those monthly lessons taught about birds but also about their place in the landscape and the value of open space. It wouldn't have been called a "land ethic" back then, but that is what it was. Elizabeth Dickens died just before I was school age, but bird study carried on with one of Miss Dickens' students, Merrill Slate (1925–2012). I had Mr. Slate for bird study from grade one right through my senior year of high school. I stand on their shoulders too.

A Carolina wren in the hands of a young boy who will never be the same at the Block Island banding station during the 2010 RINHS BioBlitz.

Josie Merck established the Ocean View Foundation (OVF) in 2000: a non-profit environmental education organization. For me, what started as a very part-time commitment to help her shepherd the building of the Ocean View Pavilion and site, and to create opportunities for the public to engage with nature, resulted in our creating—over 17 years—a full-fledged nature and environmental education program . . . complete with a "would-be" naturalist. In 2017 that program shifted to The Nature Conservancy (TNC) on Block Island. Josie Merck, through an endowment, created the OVF Naturalist Perch at TNC—nature's version of an endowed chair. Thus I now work at TNC.

Without Josie's vision, creativity, support, and desire to make a difference in the world, I would not be where I am today (or having anybody read these musings). It was in those 17 years that I evolved to become a naturalist. Josie's "shoulders" provided the opportunity for me to explore and create a myriad of ways to pursue natural history work. That work includes so many facets: attending to the important connection between art and nature, supporting community science projects so that a great variety of people can be

involved in natural history, doing work that illustrates that small actions can gain big results. Through the OVF I had incredible leeway to imagine and experiment with a variety of ways to connect people and nature. But it was not just me; the opportunity to collaborate and dream how we might make a difference could only have been done with Josie and me as collaborators. She is an artist with a naturalist's eye, and I am a naturalist with an artist's eye.

The "shoulders" on which I stand are not limited to people I actually know. I have been inspired by many great naturalists. I will never be able to say the names of them all, they are too numerous, and hopefully, there are more to come. But here is a sampling:

Rachel Carson inspired and guided ways in which to work in the arena of environment and nature. Her environmental writing (*Silent Spring*), combined with her nature writing (*Under the Sea Wind*, and others) illustrated different ways of writing to educate and inspire care for our natural world. One volume that continues to guide me is *A Sense of Wonder*. The premise is that all children must have a caring adult to spend time with in nature. An adult who shares their own sense of wonder and awe, and leads by example with curiosity and wonderment, is among the best of teachers.

E.O. Wilson is a prolific writer known for his research work with ants, but also he probed the edges of "hard" science by promoting the idea of Biophilia—the innate human need to connect with nature. The broad scope of E. O. Wilson's writing is its own wonderment. Consider: *Biophilia*, *Letters to a Young Scientist*, *Half-Earth: Our Planet's Fight for Life*, *Anthil*l (a novel), *Journey to the Ants: A Story of Scientific Exploratio*n, and so many more—and the variety is immense.

E.B. White is of course known for *Charlotte's Web*, *Stuart Little*, and *Trumpet of the Swan*. These books would not be so engaging without his keen observations of nature and so many non-human creatures inside and out.

Bernd Heinrich is a prolific nature observer and writer. Again the titles are numerous: *Winter World*, *Summer World*, *Mind of a Raven*. Nature writing can do so much to teach and inspire awe, even reverence.

Robin Wall Kimmerer is an indigenous botanist and writer. Braiding Sweet Grass, and recently The Serviceberry, both describe nature beautifully, but more importantly insist that we examine our connections and relationships with nature.

John McPhee—author of *Coming Into the Country*, *Founding Fish* (about the American shad), *Encounters with the Archdruid*, and so many more—writes about a broad array of subjects, not all of which are about our natural world. *Encounters with the Archdruid* is a wonderful and thoughtful book comprised of three encounters between a staunch environmentalist and a developer of land, minerals, and dams. McPhee accompanies each pairing as they discuss the pros and cons of each man's beliefs and goals in the three different settings. What is revealed is that they all share reverence in the natural world, even if their views of resource use and human interactions within the world of nature differ. There is much to consider in this tome. (Editor's note: One of my first exposures to John McPhee's writing was an essay entitled "Travels in Georgia," which was first published in *The New Yorker* in April 1973 and appears in two of his collections—*Pieces of the Frame* and *The John McPhee Reader*. It's as profile of Carol Ruckdeschel, a young biologist working for the state of Georgia. Carol would later marry Bob Shoop, 2004 RINHS Posthumous Distinguished Naturalist.—RDK)

Jane Goodall's emphatic "You make a difference" and her faith that "we can, we will, we must" take action on behalf of theEearth and her inhabitants is inspirational and a call to action that is hard to ignore. And to my mind, it must not be ignored.

Elizabeth Kolbert is another prolific writer who is often featured in *The New Yorker* and who produces wonderfully researched and readable work about our earth. To date, her book *The Sixth Extinction: An Unnatural History* is my favorite. I tdescribes the five mass extinctions that Earth has endured, and the sixth mass extinction that we are living through presently—the first to be human caused. It is not that the book is so interesting and comprehensive about extinction events; it alleviated my despair about the Earth being doomed. I came away with the relief of believing that we/humans, and many other animals, may not survive this sixth extinction, but Earth will. Afterall, it has already persevered through five mass extinctions.

All of these writers have taught me, inspired me, and propelled me off their shoulders toward greater understanding of the intricacies of nature, and *Homo sapiens*' unbalanced place in nature. Well . . . if not greater understanding than at least an acknowledgment that it is complicated!

I've tried to identify some basic principles that do—and will continue to—guide my work:

- One must know a place to love a place, and one must love a place to care about and/or save a place. Or said another way: to save a place one must love that place, and to love that place one must know that place. This applies to any

place: a backyard, a neighborhood, a park, Block Island, the Antarctic, etc. I first internalized this precept from the film *180 Degrees South*, the retelling of Yvon Chouinard and Doug Tompkins' youthful adventure to Patagonia, which was the seed to their work to save parts of Pataonia. If you haven't seen this film, I recommend it.

- I try to promote slowing down. One of the best ways to see nature is at a "walker's pace."

- I truly believe that small actions matter and can have outsized effects. Community science and the practice of bird banding are based on this truism. In community science, individuals provide small bits of data that contribute to a whole, and each banded bird represents at least one point of information, which when considered with all the other bandings combines to describe a much larger understanding of the species, or range, and/or overall presence of birds around the world. In the world of art and painting this concept is evident in pointillism. In a different way of noticing that small actions can make big differences, consider the action of a lever with a well-placed fulcrum—a small effort can have a large effect. And, even if you are the only one taking a small or single action, it matters what YOU do. In the parable of not being able to save an entire shoreline of beached sea stars, it matters to the one that you can save by tossing it back into the water.

- Embrace a sense of wonder. Look for the marvelous, appreciate it, and show it off to others

- Lastly, for me it is critical and necessary for me to share whatever natural history I know:
  - bird banding is more rewarding when I'm explaining and sharing the wonder of a bird with others; to quote Elise Lapham again, "once I put a bird in your hand you are never the same;"
  - a nature walk is more fun when I can share and explain what we are seeing;
  - leading a horseshoe crab survey and tagging program it is more rewarding when others are helping and sharing the amazement.

The Distinguished Naturalist Award came at a good time for me. I worry too much about the fate of our home planet. Sometimes I wonder if my teaching, or attempts to inspire awe and wonder, matter? I wonder if I am effective at all in motivating positive action on behalf of our earth or even our local environments; or if, with my various walks and programs, am I just entertaining people with the amazement and joy of being in nature? I question if this entertainment metamorphizes into care and action?

Soggy weather could not dampen the spirits of the young students participating in the 2010 RINHS BioBlitz on Block Island. Who knows how many of them will go on to make contributions to conservation of the places they love.

Elizabeth Kolbert's book put me at ease. We, the human race, may be doomed as we irreparably damage Earth and its climate, but Earth will likely survive. And I find myself every day trying to embrace Jane Goodall's complete conviction that we each matter and make a difference, and her belief that "we can, we will, and we must" take action for the Earth and her inhabitants. I guess, as I take on both Kolbert's and Goodall's understandings, that makes me a pragmatic, optimistic naturalist. This award and the support that everyone has provided has been a salve on my questioning spirit. It means so much to me, and thanks to you all, it encourages me to keep trying to be the best naturalist that I can be.

I like to think that we are all naturalists of a sort. There are so many ways to know the natural world. I encourage you all to find your own way to know nature. You don't have to be a scientist chasing down hypotheses. You can do it in a garden, at a bird feeder, while taking your dog for a walk, sketching in nature, listening to an ocean roll cobbles at the shore's edge or a wetland full of spring peepers, watching

clouds and emerging mushrooms and wondering how does that happen. You can write about what you see, hear, smell, taste, or feel in nature. We can all know nature in different ways. My friend, Nancy Greenaway, understands natural history through poetry:

Snowy Owl

wide-winged whiteness
sensed before seen
swooping soundlessly
under low-lying layers
of cloud quilt
white on white
white on gray
soft on soft

too large to be living and airborne

too white to be worldly and wild

floating unfuffled
on drafts of arctic cold

piercing consciousness
not with bill or quill or talon
but with light and motion

avian divinity
spirited from another dimension

penetrating dusk
by force of feathers

Adapted from Kim's talk accepting the 2025 RINHS Distinguished Naturalist Award in November 2024. A detailed profile and Kim and her accomplishments follows about a page farther down.

RINHS 2026 Awards

As part of its mission to advance public understanding of natural history and the role of naturalists in environmental conservation and management, the Rhode Island Natural History Survey has instituted three awards recognizing accomplishments of individuals from, or working in, Rhode Island. To see more about all our awards and find complete lists of past awardees, or to learn how to nominate someone you believe to be deserving, go to https://rinhs.org/events/awards/.

The **Distinguished Naturalist Award** is presented by the Survey to an individual who has made significant contributions to scientific knowledge of Rhode Island's organisms, geology, and ecosystems; is recognized as an outstanding teacher and educator about the natural world; and/or has significantly enhanced public awareness of the importance of understanding Rhode Island's ecosystems.

The **Founders' Award for Exceptional Service** celebrates the organization's heroes: individuals, groups, or organizations that have made extraordinary contributions—time, things, money, expertise, all of the above—that substantially advanced the Survey's longevity and mission. It is our newest award—created in 2020. Recipients of both the Distinguished Naturalist and Founders' Awards can be living or deceased, and are selected by the RINHS Board of Directors from lists of nominations made from people both within and outside of the Survey.

The **Golden Eye Award**, established in 2008, recognizes someone for making a notable natural historical observation and bringing it to the attention of the community—a "good catch." It could be a new species for Rhode Island, a rare or otherwise unusual species, an invasive species, or some other natural historical phenomenon. RINHS staff makes the nomination, and the award is voted on by the Board of Directors.

The 2025 awards were presented at a luncheon at the South Kingstown Elks Club on November 22nd, 2025. We presented a Distinguished Naturalist Award to Kim Gaffett (whose talk accepting the award was adapted into the preceding essay), a posthumous Distinguished Naturalist Award to James Franklin Collins, a Founders' Award to the Matt Largess, and a Golden Eye Award to Robin Baranowski and James Natale. A video of the presentations is on the Survey's YouTube channel at https://www.youtube.com/watch?v=Qck8iycZrA0. More about all the winners is in the following articles.

Call for Nominations: The 2026 nomination period is open for both the Distinguished Naturalist Award and the Founders' Award for Exceptional Service. Nominees can be living or deceased. Current members of the Board of Directors are not eligible, nor are members of the RINHS staff. To nominate someone, send a letter or email to the Survey office marked "Attention: Awards" or contact any member of the Board of Directors. In your correspondence please describe the ways in

which your nominee excelled in the sort of contributions summarized above or provided in more detail on our website. Please include as much specific detail as possible, as we may not be personally familiar with your nominee's work. Past nominations are kept and reconsidered for up to five years, so if you've nominated someone unsuccessfully in the past, you are not required to re-nominate them. You may, however, wish to provide additional information on your nominee if you feel it would strengthen the nomination.

Kimberley Gaffett
RINHS Distinguished Naturalist 2025

Those who know Kim Gaffett and her work agree: there are few who more fully embody the criteria of a distinguished naturalist than Kim Gaffett. On Block Island, where she grew up and has spent most of 50 years as a naturalist, Kim has been involved in virtually every aspect of environmental education, conservation, and research. The effects of her work are widespread, and her name is a byword for thoughtful, energetic, community-based natural history.

In the early 1980s, Kim began working with Elise Lapham at the bird banding station Lapham established on Clay Head. In the early 2000s, Kim came to run the banding operations, which continue to this day, one of the longest running banding records in the country, offering researchers a detailed and unique look at bird populations on the island and far beyond.

Kim's bird conservation and research go far beyond the banding itself. Many groups and visitors have come to the Block Island Banding Station to learn from Kim. A highlight for the Block Island School second graders is visiting Kim at the banding station to see her work, to learn about the birds, and to release birds once they are banded. She has taught numerous other groups of students who visit the island and the banding station, giving them their first-ever close-up look at a bird, placing banded birds into the hands of children and adults who have never held a bird before. The impact this has on changing people's connection to birds and their awareness of them in their everyday lives can never be explained in mere words.

Kim also continues the work of Block Island's legendary naturalist and birder Elizabeth Dickens by leading a Community Bird Census on the day after Christmas – a ritual for many islanders and a delight to visitors.. Twice a month in the off season, Kim leads Crazy-As-A-Coot bird walks where she shares her knowledge and enthusiasm for the island's winged visitors. During COVID she added a "Where-on-Earth" bird walk for folks anywhere on earth to send her their bird list for the day.

Kim Gaffett (right) accepting the 2025 RINHS Distinguished Naturalist from Board President Sarah Gaines and Executive Director David Gregg (photo by Curt Milton).

In addition to recognizing the importance of education, Kim understands that strong communities are also essential for lasting environmental conservation, especially in a literally insular setting. She has organized green screenings of environmental films for 20+ years, starting with solar-powered slide shows at the pavilion and including movie nights at the library in the summer and film and soup nights at the library in the winter. Kim is a regular contributor to the Block Island Times, writing the monthly "Ocean Views" column about the flora and fauna of the island. In 2022, her columns focused on the micro seasons on Block Island, enlightening residents and visitors about the many changes in the natural world that they might ordinarily miss.

Other creative ways Kim engages people in nature include organizing volunteers to count seals as part of Save the Bay's work documenting the species on Narragansett Bay, organizing "Queerness in Nature" walks as part of Queer Block Island's pride events, and planting projects for students and other volunteers establishing trees for Arbor Day, restoring dunes with beachgrass, and teaching about gardening with summer vegetable and flower beds. Kim uses

her energy and island connections to facilitate all manner of work on Block Island by off-island researchers and educators that would be difficult or impossible without her: pollinator surveys, fish monitoring, moth, mushroom, and dragonfly inventories, invasive plant removal, other bird tracking projects, and natural history tours. Kim created an annual Mystery Walk on Block Island with a focus on a particular theme, such as landscapes, habitats, zoning, inland ponds, island history and more and is universally recognized as the first person to call when a sick or injured bird is found. She has returned many birds to the wild.

Kim served as the director of the Ocean View Foundation (OVF) from its inception in 2000 until its programs were transferred to The Nature Conservancy (TNC) in 2017. The Foundation's goal was to educate islanders and visitors on the natural history and beauty of Block Island. She was instrumental in helping to save the site of the old Ocean View Hotel and turning it into a park and nature area. This included building the foundation's open-air pavilion overlooking Old Harbor where she runs many of her programs and community events. The nature-themed artwork and other features at the site are created by local kids under Kim's tutelage. Over the years she has created a full schedule of summer programs covering everything from bird banding and stargazing to identifying wildflowers and plants, art and nature walks, and many more. At her Earth Mother's Day event, the coming of Spring is celebrated by the community.

In 2017, Kim went to work with the Nature Conservancy on Block Island where she occupies the Ocean View Foundation Perch as a naturalist and educator. The work she did at OVF moved with her to TNC and has grown to include more programs and events that help visitors understand the natural history of the island and the importance of supporting and maintaining its wild ecology. Kim has appeared in numerous publications and on radio and TV to discuss and promote environmental issues and nature on Block Island and elsewhere. In 2021, she was featured in an episode of the BirdNote podcast, "Threatened," demonstrating banding, talking about the importance of collecting science data as a way of understanding the changes we are making to the ecosystem, and introducing students to her work.

During her second tenure as Block Island's First Warden (the town's mayor) from 2006 to 2014, Kim became an advocate for the Block Island Wind Farm, the nation's first offshore wind generation project. Kim highlighted the damage climate change is doing not only to Block Island but to the whole world and urged the construction of the wind farm as a way to cut the island's dependence on fossil fuels for electricity. The wind farm was built and stands as a testament to Kim's promotion of public awareness of environmental issues. The five turbines at the wind farm now supply 100 percent of Block Island's power needs as well as contributing green energy to the power grid on the mainland and helped create public acceptance of offshore wind energy that paved the way for larger projects nearby.

Rising seas created by climate change are a critical problem for low-lying islands like Block Island, and Kim is an active member of the Sea Level Rise Committee on the island, helping to plan for a future when the island may look drastically different than it does now. Kim has been an advocate for "living green" for many years and has lived totally off the grid since 1992, using solar cells to power her home. She has coordinated green renovations to several properties on the island owned by the Ocean View Foundation.

Being a naturalist, scientist, educator, in service to others is Kim's life's work. It is also her way of doing things to show up, roll up her sleeves and put in the work to make them happen. If not for Kim's efforts, Block Island would surely be a much different place.

While most of her work has focused on the island, Kim has also had a reach beyond its shores. She served on the board of the Rhode Island Natural History Survey and as its president. She consulted with other naturalists and groups throughout New England, including the Island Institute in Maine, to help other island communities grow and adapt in changing times.

Kim Gaffett embodies the best qualities of a community leader and a scientist . . . a community scientist. She has been active in so many areas of environmental education and awareness, that it is close to impossible to list them all. It is equally difficult to overstate how important Kim's work on Block Island has been in cataloging and researching the flora and fauna there, in making island residents and visitors aware of that rich natural heritage, and in promoting that heritage to the wider world. She is truly an ambassador for the beauty and importance of the natural world. She lives her work every day and inspires a sense of awe, wonder and responsibility in others.

Adapted by David Gregg from nomination letters by Curt Milton, Penny Lapham, Erica Anderson, and Scott Comings.

James Franklin Collins (1863-1940)
RINHS Posthumous Distinguished Naturalist 2025

The 2025 recipient of the Rhode Island Natural History Survey's Posthumous Distinguished Naturalist Award is James Franklin Collins. Collins was a silversmith by trade, working at Gorham Manufacturing Company in Providence, and originally a botanist only by avocation. He proved so adept at taxonomy and field research that he left silversmithing and enjoyed an accomplished career at the Brown University Herbarium and U.S. Department of Agriculture. Collins was widely recognized in his lifetime for his botanical accomplishments, and even though he exemplified the curiosity, diligence, and resourcefulness of a great natural historian, he is not well known now. It is hoped this award will go some way to remedying this oversight.

Photo courtesy of Brown University.

J. Franklin Collins was born on December 29, 1863, in North Anson, Maine, schooled in Providence, Rhode Island, and originally found employment as a silversmith at Gorham. Collins studied botany on his own time, and his energy and intelligence brought him to the attention of William Whitman Bailey, head of the Botany Department at Brown University (and himself named a Survey Posthumous Distinguished Naturalist in 2009).

Bailey appointed Collins as curator of Brown's Olney Herbarium in 1894. Over the next few years, Collins continued his studies and took on teaching and other duties at Brown which eventually allowed him to leave Gorham for good. Collins became the head of Brown's Botany Department after Bailey left in 1906, teaching, researching, and participated in botanizing expeditions throughout the region and beyond. His greatest adventure may have been an exploration of the Chic-Choc Range on Quebec's Gaspe Peninsula organized by Harvard with a distinguished company that included botanists Carroll W. Dodge, Ludlow Griscom, Kenneth Mackenzie, Arthur Stanley Pease, and Merritt L. Fernald. When at home, Collins helped open the U.S. Department of Agriculture's Office of Forest Pathology at Brown, where he studied Chestnut Blight, and became known as an authority on the diagnosis and control of tree and shrub diseases and tree surgery, continuing until 1933.

In Collins' time, it was common for an academic botanist also to participate in the amateur botany community, advising and speaking at local and regional societies, leading field expeditions, and publishing widely both in academic journals and society bulletins. In this, Collins put field botany in Rhode Island on a firm intellectual footing, transmitted practical skills to working arborists, and fostered a community of naturalists working together to understand the botany of the state and region. He died in 1940.

Adapted from the nomination letter by Peter Lockwood and the memorial article published in the April 1942 issue of Rhodora by Walter H. Snell (2024 RINHS Posthumous Distinguished Naturalist).

Matthew Largess
RINHS Founders' Award for Exceptional Service 2025

With its 2025 Founders' Award, the Natural History Survey recognizes Matthew Largess for 25 years of generous, unceasingly energetic support that has taken many forms. Largess Forestry has been a major sponsor of Rhode Island BioBlitz every year since 2001, and Matt has also led others into sponsorships. He has led tree walks at many bioblitzes where, for many, Matt's voluminous knowledge and

seemingly unbounded enthusiasm, expressed with memorable antics like hugging trees and eating poison ivy, are highlights of the whole event. Matt, with his company, Largess Forestry, was a key participant in the Survey's landmark Forest Health Works Project, helping with training, invasive removal, and deer abatement experiments.

The excitement Matt has found in the Rhode Island BioBlitz has led him to get involved in others' bioblitzes outside Rhode Island, such as one in Agawam, Massachusetts, and he has brought the Survey along to meet others doing similar things and broadened our horizons.

Curt Milton

Matt can also be counted on to promote the Survey at the drop of a hat to those he meets in his arboriculture business or on his many adventures. He is frequently to be found working, leading walks, or participating in events as far afield as the Rocky Mountain West proudly wearing Rhode Island BioBlitz t-shirts. Ask him about the shirt and he will extoll Survey projects, people, and ideas.

Matt and Largess Forestry have been instrumental in important community-based conservation projects beyond the Survey's BioBlitz. Matt was the person who recognized Oakland Forest in Portsmouth for the relic pre-contact forest it was. Matt was a big part of the effort to communicate the site's importance to the public, which resulted in its purchase and permanent conservation by the town.

Matt and Largess Forestry have also been carrying out community tree planting projects in the Providence urban area for many years., helping urban residents take ownership of their streetscapes, ameliorate the urban heat island, and foster wildlife.

Matt's love of old, interesting trees has led him on many adventures around the country. Among the more quixotic has been the search for the Ivory-billed Woodpecker, a hunt that took him to a remarkable relic of ancient cyprus trees in central Florida that he has subsequently been introducing to forest researchers and conservationists far and wide.

The whole Rhode Island community, not just the Natural History Survey, would be poorer without Matt Largess, who is generous with his time, money, and above all his abundant energy. Thanks, Matt!

Robin Baranowski James Natale
RINHS Golden Eye Award 2025

The Rhode Island Natural History Survey recognized Robin Baranowski and Jim Natali with the 2025 Golden Eye Award for their discovery of small whorled pogonia (*Isotria medeoloides*), also known as the green fiveleaf orchid.

The Golden Eye is perhaps the most interesting award of the Survey's awards. The Golden Eye Award recognizes a naturalist for reporting an extraordinary field find. It could be a new species in Rhode Island, a rare thing, an invasive thing, a phenomenon that nobody had ever noticed before, something like that. This award is nominated by the staff and then approved by the Board of Directors. But it doesn't just recognize luck: "Oh, I stumbled across this weird thing nobody had seen before." And it doesn't recognize just knowledge. It recognizes the application of knowledge over a long time to make luck to find an extraordinary thing and then go even farther. It actually takes an extra leap to say: "I've never seen that before. That's unusual." And then you need another leap to say, "I've got to find out what this means." If you don't know what it means, you then need to track down somebody who can tell you what it means. And then, once you get to that point, if you just go go, "Huh, that's really cool" and walk home, you haven't really advanced us anywhere. So the award also recognizes sharing what you learn. The Golden Eye recognizes the entire process—perseverance, identification, biological and ecological knowledge, curation and recordkeeping, and communication. To paraphrase one of our board members, "Some people get lucky. A few people make their own luck through hard work. And only a very few people work hard, get

lucky, know how lucky they are, and take the time to share what they found." Those are the people we want to recognize with a Golden Eye award.

The Golden Eye started in 2008. We awarded it to Matt Ricker, a URI student, who was the first to find water chestnut, a horrible invasive in the state. We also recognized Doug McGrady in 2009 for his dozens of rare plant finds that he had recorded to that point. We recognized Aaron Hunt in 2016 for cataloging 1,300 species of moths on Block Island. You can get this award for finding invasive things, and a lot of discoveries are those. But A Golden Eye can recognize finding very rare things or really just making a big contribution.

This year we presented the Golden Eye Award to two people who found the small whorled pogonia, a native orchid. It was classified as "state historic" until Spring 2025, and had not been seen in 20 years. We had given up hope. This is a species that is of enormous regional interest. The Survey has gotten requests from all over the country for our historic records on small whorled pogonia because people are interested in modeling its decline and its habitat. When we receive those requests now, we're providing more than just historic data. We have Robin and Jim to thank for putting Rhode Island literally back on the small whorled pogonia. Wild orchids are extremely odd and difficult plants to learn about and deal with, so having this data point is just huge.

Jim: "This orchid that we found—we weren't looking for anything. We were just there to enjoy the preserve. I'm looking through this highly degraded forest of barberry and bittersweet and dying ash. It was a former pasture land. It about 50 feet from a parking lot, so I'm just looking around expecting nothing. And then I see the small whorled pogonia and I couldn't believe my eyes. I guess it was the find of my botany career. So I'm super psyched and we're going to go back next year and see if we can find some more."

Small whorled pogonia (*Isotria medeoloides*) in North Carolina (from Wikimedia Commons, Creative Commons license cc-by-2.0).

Robin: "I'd just like to say that we wouldn't have found this if we weren't wandering, as me and Jim usually do—'Let's go out in the woods and well, go off trail.' I know it's not a popular thing to do, but we go out in the woods and wander. So, I implore everyone to get out in the woods and maybe somewhere you haven't been and get off the trail and look around because there's probably stuff out there. This plant was surrounded by barberry, so we'd like to get that out of there. We can try. I visit many, many spots every year and the same spots every year. I've noticed the most insane increase of invasives the past two years. So, if you have them in your yard, please get rid of them. If you see them out in parks, pull them if you're allowed to in that area. Let's get rid of the invasives so we give these rare plants a chance.

Adapted from the YouTube transcript of David Gregg's presentation at the 2025 Awards Luncheon.

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The Rhode Island Natural History Survey is a nonprofit organization dedicated to Ecosystem Resilience Through Biodiversity

Our Mission

To promote ecosystem resilience, the Rhode Island Natural History Survey collects, organizes, and disseminates information on the State's biodiversity and ecosystems. We engage curious observers of all ages—professionals and amateurs, scientists and artists—in field-based experiences that build connections to science, conservation, and the natural world.

Our Vision

To prompt a sense of wonder that inspires people to value and protect biodiversity through a deeper understanding of the world around us.

Notices—Save the Dates

Watch our *News to Use* email newsletter for details and registration.

RINHS 2026 Annual Meeting: Friday, May 8, 7:00 pm in Kingston, with a talk on RI's Stone Walls by Elliot Vosburgh.

BioBlitz 2026 Orientation meetings: Thursday, April 16, 6:00 pm at Roger Williams Park Zoo in Providence & Saturday, May 9 at 3:00 pm in Kingston. BioBlitz participation is open to ALL curious nature lovers, no matter your training or experience. We need everyone from check-in table helpers, to able-bodied bucket carriers, to species experts to create a successful event! Orientation is not required, but is very helpful for first time participants. At orientation you'll learn how a RI BioBlitz is conducted, the variety of roles YOU can fill, the diverse teams you can choose to participate with, and why this year's site in Kingston & Narragansett is notable.

Rhode Island BioBlitz 2026: Friday and Saturday, June 5th and 6th, approximately 2:00 pm–2:00 pm. The primary site will be the URI East Farm Campus in Kingston, RI, with satellite sites at the Audubon Society of Rhode Island's Kingston Wildlife Research Station nearby and South Ferry Beach in Narragansett. This will be our 27th BioBlitz.

To Contact Us. . .

Rhode Island Natural History Survey
P.O. Box 1858, Kingston, RI 02881
Tel: 401.874.5800
rinhs.org
info@rinhs.org

Visit us in person at Bldg. #14 on URI's East Farm
1 East Farm Road, Kingston, RI 02881

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