

A note on seal watching in the Northeast United States

Robert A. DiGiovanni Jr and Amber M. Sabrosky

Riverhead Foundation for Marine Research and Preservation 467 East Main Street, Riverhead NY 11901, U.S.A.

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The harbour seal (*Phoca vitulina*) is a year-round inhabitant of coastal waters of eastern Canada and Maine (Boulva and McLaren, 1979), and occurs seasonally along the New Hampshire to New Jersey coasts from September through late May (Barlas 1999, Hoover *et al.* 1999, Slocum *et al.* 1999) (Fig. 1). The grey seal (*Halichoerus grypus*) has a similar winter distribution in U.S. coastal waters, and is found year-round further south to Massachusetts. Both species haul-out on identical substrate and mixed groups are not uncommon, particularly around Cape Cod (Barlas 1999, Murray 2008). Many of the haulout sites are viewable from shore or accessible by foot, small boat and aircraft. Therefore, seal watching is a popular activity for the general public, and is an important component of the coastal marine eco-tourism industry. Organized seal watching most likely evolved as an addition to existing programmes, such as nature walks, whale watching, birding, charter fishing, and coastal embayment monitoring programmes (*e.g.*, Narragansett Save the Bay; <http://www.savebay.org>).

Along the northeast US coast, seal watching has a distinct seasonality related to the movement of seals. Seal watching occurs from May through October in Maine, April through November in Massachusetts (excluding Cape Cod, which has a year-round programme), December through mid-April in New York, and February through April in Connecticut.

Seal watching programmes provide important information on the level of public interest and potential support for conserving protected species, and provide a venue for researchers to bring science to the public.

To characterize seal watching off the northeast US coast we conducted a phone survey of state government agencies, environmental organizations, and commercial enterprises in the states of Maine, Massachusetts, Rhode Island, Connecticut, New York, and New Jersey. A list of 43 short-answer survey questions was developed, covering diverse topics such as fees, presence/absence of a naturalist, and reporting/response to stranded animals or human harassment (Table 1). Organized seal watching activities included in our survey were those which have a regular schedule, pricing structure, and are open to the general public. Our survey did not take into account organizations that conduct one-time seal-walks for their membership. Thirty seal watching organizations were identified (Table 2), and all but one agreed to be interviewed. The 29 interviewed organizations (Table 2) represented private charters (62%), state agencies (17%), non-profit organizations (17%), and resorts (3%). Some organizations offer both seal cruises and walks, while other organizations offer only one programme yielding a total of 33 programmes. Seal walk programmes were confined to New York and Connecticut.

Table 1. List of survey questions

- 1 Name your organization including mailing address and phone number.
- 2 What type of organization would you consider yourself (non-profit, government, private, etc)?
- 3 Where is your seal watching facility located?
- 4 How does the seal watching take place (boat, walk, etc)?
- 5 Where does your seal watching take place?
- 6 What type of habitat are the seals in (sand beach, rocky island, etc)?
- 7 What species do you encounter on your tours?
- 8 What time of year does the seal watching take place?
- 9 How many years have you been in business?
- 10 If the tour is a seal cruise, how big is the boat?
- 11 How many people can participate in the seal watching at one time?
- 12 What is the duration of seal watching?
- 13 What do you charge for an adult?
- 14 What do you charge for a senior?
- 15 What do you charge for a junior?
- 16 What do you charge for a child?
- 17 Is there a minimum age requirement for participation?
- 18 Is the seal watching handicap accessible?
- 19 What type of patrons do you get and from where do they originate?
- 20 Is there a naturalist on board for educational purposes?
- 21 Do you hand out any educational material?
- 22 Do you hand out the NOAA seal watching guidelines?
- 23 Do you sell merchandise?
- 24 How many tours per year do you perform, on average?
- 25 How many animals per tour do you see, on average?
- 26 How many animals per year do you see, on average?
- 27 How many patrons participate in your seal tours annually, on average?
- 28 Do you report sighting numbers to any research group?
- 29 Do you collect environmental data during seal tours (temperature, wind direction, tide, etc)
- 30 Do you keep records of any marine debris or boat activity occurring near animals?
- 31 Does your state have a wildlife conservation plan that you know of?
- 32 Do you perform any other nature tours?
- 33 Are there any other seal watching tours in your immediate area?
- 34 Do you see animals on every trip?
- 35 Do you have any problems with the public viewing these animals after having participated in your seal watch? Specifically, since the public has this new information of how and where to find seals, do you think they go out on their own to see them?
- 36 Are there any conflicts with seals in the area?
- 37 Is there a rescue program nearby that would respond to a distressed animal?
- 38 Do you know the contact information for the rescue program nearest to you?
- 39 Have you ever encountered a distressed animal during your seal tours?
- 40 Have you ever observed other members of the public harassing the seals at any point during your tours?
- 41 If you did observe animals being harassed, who would you report the incident to?
- 42 List the website of your organization, if applicable.
- 43 Additional comments.

The lead naturalists of seal watching operations frequently serve as vessel captains, and were difficult to reach by phone. Therefore, interviews were conducted with office employees who were not actively participating in seal watching activities. Most organizations were unwilling to provide the exact number of passengers so only minimum estimates were obtained from the interviews. Likewise, most organizations would not provide financial information. To estimate revenues generated by seal watching excursions, fees were averaged over all states and trip types.

The estimated total annual number of passengers carried exceeded 55,000 (Table 2). Private companies operated all tours in Maine, whereas in Massachusetts and Connecticut tours were operated by private, non-profit, and state-funded organizations. A non-profit organization operates the sole seal watch excursion in Rhode Island. 52% of all tours have a designated naturalist and in 34% the captain serves as narrator. Over 3,700 seal watching excursions of these types are conducted annually. These excursions last from 1-6 hours, and the number of passengers per boat is highly variable (6 to 150).

An average donation of 5 USD is normally requested for guided seal walks, while boat excursions range from 20 - 90 USD per adult. Using only adult ticket prices, we estimated that annual revenue from boat-based seal excursions is approximately 1.7 million USD. Walking tours only generate around nine thousand USD. Comparatively, Campbell (1992) estimated that seal watching revenue in Canada in 1992 was 1.27 million CAD (1.0 million USD).

The largest number and greatest diversity of seal cruises occurs in Maine. Most of the trips are multi-themed (*i.e.* seal, whale, and puffin watching, lobster fishing demonstrations, and general nature tours). The harbour seal is the major species seen, although on occasion grey seals are also seen.

In Massachusetts, 4 of the 5 organizations that offer seal watching excursions focus solely on observing seals in their natural habitat. One

hotel-operated land-based tour provides general nature information on seals seen in Massachusetts. Depending on location and season, the haulout sites may be dominated by either harbour seals or grey seals, or may contain mixed groups. In Rhode Island and Connecticut, seal watch cruises are focused on harbour seals, since grey seals are rarely seen. New York has 4 organizations that perform seal watch excursions, two of which conduct both land-based and boat trips. Seal walks began on Eastern Long Island at Montauk Point State Park as member tours by non-profit organizations. As interest grew, the New York State Office of Parks, Recreation and Historic Preservation also began conducting walks. This increased the number of tour groups and led to a revolving-door effect for the single access point to view the seals. This activity increased non-intentional harassment (*e.g.* flushing) of seals. To counteract these activities, New York employed naturalists and erected signs to educate the public. Twenty-eight percent of the organizations distribute educational material and National Marine Fisheries Service Seal Watching Guidelines. Most organizations do not record environmental data or marine debris, and did not identify seal harassment (*i.e.* primarily boat approaches to haulouts) as an issue. If observed, however, harassment was reported to the local stranding group or harbour patrol. All Massachusetts organizations observed harassment of seals, but only 2 in Maine and none in Connecticut.

As seal populations and their accessibility increases, seal excursions have increased in number and frequency. These excursions provide an economic stimulus to the local economy while providing a great platform for data collection and education. Although seal watching has been around for a long time, only recently have steps been taken to establish and enforce seal watching guidelines. Seal watching trips are a great opportunity for education and guidance, but unfortunately, not all trips are maximizing the outreach and conservation components. The survey conducted revealed that all excursions educate about general pinniped biology yet few touch on the regulations surrounding their protection or who to call if an animal is being harassed or is in need of care.

Table 2. Summary of seal watching by state

Summary of seal watching by state	Maine	Massachusetts	Rhode Island	Connecticut	New York	Total
Number of organizations that perform seal watching tours	8	10	1	5	5	29
Number of programs offered for seal watching	8	11	1	5	8	33
Organizations that utilize trained naturalists	2	4	1	3	5	15
Annual number of participants on all tours	43 750	6 650	2 500	1150	3 065	57 115
Total tours performed per year	2 390	1 170	100	20	30	3 710
Average Number of months seal watching tours occur	6	6	6	2	5	

There is no doubt that seal watching excursions have an impact on the populations which they observe. Whether that impact is positive or negative is solely based on the operators of the seal watching trips.

Guidelines have been drafted by the National Marine Fisheries Service: (http://www.nmfs.noaa.gov/pr/pdfs/education/ner_seal_watching.pdf) but there is no incentive for dissemination of this information. As ecotourism is growing, now is an opportunity to educate the public about ecosystem-based management and that humans are an integral part of the environment. Without these educational guidelines we could be educating the public to harass these animals. By incorporating best seal watching practices on all excursions we could minimize the impacts of these programmes on animals.

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