

considerably reduced from its historic extent.

The best estimate of present abundance is about 300 animals. In 1998, the right whale population size was estimated to be 291 individuals (Kraus *et al.*, 2001) based on a census of individual whales identified using photo-identification techniques. It is assumed that the census of identified and presumed living whales represents a minimum population size estimate. However, the true population size in 1998 may have been higher if: (1) there were animals not photographed and identified; and/or (2) some animals presumed to be dead, actually, were not.

The population growth rate reported for the period 1986–1992 by Knowlton *et al.* (1994) was 2.5 percent (CV=0.12), which suggested that the species was showing signs of a slow recovery. However, more recent work by Caswell *et al.* (1999) has suggested that crude survival probability declined from about 0.99 in the early 1980s to about 0.94 in the late 1990s. The decline in survival probability is statistically significant. Additional work conducted in 1999 concluded that survival had indeed declined during the 1990s (Best *et al.*, 2001). Although heterogeneity of capture could negatively bias survival estimates, subsequent review of this study concluded that this factor could not account for all of the observed decline, which appeared to be particularly marked in adult females.

Seasonal Movement and Habitat:

Right whales migrate annually between high-latitude feeding grounds and low-latitude calving and breeding grounds. In general, most of the whales spend the spring and early summer off the coast of New England, then, in the latter part of the summer and fall, move to the waters off southern Canada. Some whales may remain in these northern waters throughout the winter, but the majority leave. Therefore, the exact location of a large segment of the population is unknown during the winter. A small fraction of the population, consisting almost entirely of pregnant females and juveniles, migrates south in the winter to the only known calving ground for the species - the coastal waters of Georgia and northeast Florida.

Breeding and Calving: The precise location of a breeding ground for right whales has not been identified. However, as North Atlantic right whales have been observed engaging in breeding-like behavior throughout much of their range, the concept of a specific breeding ground may not be relevant for this species.

The only known current calving ground in the western North Atlantic is

in the coastal waters of the southeastern United States, especially the shallow waters from Savannah, Georgia, south to Cape Canaveral, Florida. It has been speculated that other coastal areas, such as Delaware Bay and Cape Cod Bay, may have been calving grounds before the population was decimated by whaling (Kenney, 2002).

Prey: Right whales feed exclusively on zooplankton, especially on large calanoid copepods (mostly of the genera *Calanus* and *Pseudocalanus*). At times, they also feed on juvenile euphausiids (also known as krill), smaller copepods, pteropods (tiny planktonic snails), or the planktonic larval stages of barnacles and other crustaceans (Kenney, 2002).

The waters along the New England coast are a primary feeding habitat for the right whale. Research suggests that right whales must locate and exploit extremely dense patches of zooplankton to feed efficiently (Mayo and Marx, 1990). These dense zooplankton patches are known to occur in the spring, summer, and fall right whale habitats from Cape Cod Bay to the Bay of Fundy.

Status of North Atlantic Right Whales Under the Endangered Species Act

The right whale was listed as endangered under the Endangered Species Conservation Act, the precursor to the ESA, on June 2, 1970 (35 FR 8495; codified at 50 CFR 17.11). The species was subsequently listed as endangered under the ESA in 1973, and as depleted under the Marine Mammal Protection Act in the same year. NMFS has the lead responsibility for developing, implementing, and monitoring a recovery program for this species.

NMFS published a Final Recovery Plan for the Northern Right Whale (Recovery Plan) in 1991, and a draft, revised Recovery Plan in 2001. Habitat related objectives were identified in the 1991 Recovery Plan, as well as in the 2001 draft revision. One of these objectives was to characterize known habitats of special importance to the species, identify other habitats essential to the conservation of the species, and protect these areas as necessary. Additional objectives of the Recovery Plan concerning habitat include the collection of new data and analysis of available data to assess the need for expanding or modifying the existing critical habitat boundaries.

NMFS was petitioned by the Right Whale Recovery Team to designate critical habitat for right whales on May 18, 1990. A notice was published in the **Federal Register** on July 12, 1990 (55 FR 28670), requesting information and comments on the petition. The proposed critical habitat designation was

published on May 19, 1993 (58 FR 29186), and the final rule was published on June 3, 1994 (59 FR 28793; codified at 50 CFR 226.203). Areas included in the initial critical habitat designation were identified primarily on the basis of use by right whales. The designation recognized and discussed important characteristics of these habitats that relate to aspects of right whale biology, such as foraging, calving, and nursing. Specifically, this designation includes portions of Cape Cod Bay and Stellwagen Bank, the Great South Channel (each off the coast of Massachusetts), and waters adjacent to the coasts of Georgia and the east coast of Florida.

Petition To Revise Existing Right Whale Critical Habitat

On July 11, 2002, NMFS received a petition dated July 9, 2002, from The Ocean Conservancy requesting that NMFS revise the current critical habitat designation for North Atlantic right whales by expanding its boundaries in both the Northeast and Southeast U.S. The petitioner requests that NMFS expand the existing Southeast critical habitat designation to the following coordinates: 31° 30' N to 29° 40' N from the shoreline out to thirty nautical miles; 29° 40' N to 28° 00' N from the shoreline out to ten nautical miles. The petitioned area would add approximately 2,700 nm² (5,003.6 km²) to the current critical habitat coverage. The petitioner also requests that NMFS expand and combine both the existing Northeast critical habitat designations (Cape Cod Bay and Great South Channel) into one critical habitat area bounded by the following coordinates: 41° 41.2' N/69° 58.2' W; 41° 00.0' N/69° 05.0' W; 41° 00.0' N/68° 13.0' W; 42° 12.0' N/68° 13.0' W; 42° 12.0' N/70° 30.0' W; 41° 46.8' N/70° 30.0' W; and on the southwest corner by the shoreline of Cape Cod, MA.

The petitioner states that 10 years of new data regarding right whale distribution and causes of mortality along the east coast of the United States show that the current critical habitat designation is not sufficient to protect right whales from further anthropogenic mortality. According to the petitioner, the additional critical habitat contains several features essential to the conservation of the right whale in the western North Atlantic that may require specific protection or management considerations to ensure the survival and recovery of the species. The petitioner stated that the areas petitioned for expanded critical habitat experience high levels of human disturbance in the form of shipping