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COLLISIONS BETWEEN SHIPS AND WHALES

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Abstract--Although collisions with motorized ships are a recognized source of whale mortality, little has been done to compile information on the frequency of their occurrence or contributing factors. We searched historical records and computerized stranding databases for evidence of ship strikes involving great whales (i.e., baleen whales and the sperm whale). Historical records suggest that ship strikes fatal to whales first occurred late in the 1800s as ships began to reach speeds of 13-15 kn, remained infrequent until about 1950, and then increased during the 1950s-1970s as the number and speed of ships increased. Of 11 species known to be hit by ships, fin whales (*Balaenoptera physalus*) are struck most frequently; right whales (*Eubalaena glacialis* and *E. australis*), humpback whales (*Megaptera novaeangliae*), sperm whales (*Physeter catodon*), and gray whales (*Eschrichtius robustus*) are hit commonly. In some areas, one-third of all fin whale and right whale strandings appear to involve ship strikes. To assess contributing factors, we compiled descriptions of 58 collisions. They indicate that all sizes and types of vessels can hit whales; most lethal or severe injuries are caused by ships 80 m or longer; whales usually are not seen beforehand or are seen too late to be avoided; and most lethal or severe injuries involve ships travelling 14 kn or faster. Ship strikes can significantly affect small populations of whales, such as northern right whales in the western North Atlantic. In areas where special caution is needed to avoid such events, measures to reduce the vessel speed below 14 kn may be beneficial.

Keywords--mortality, strandings, ship collisions, species conservation, right whales.

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