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Historical status of Harlequin Ducks wintering in eastern North America—a reappraisal.— Vickery (1988) concluded that "Harlequin Ducks (*Histrionicus histrionicus*) in eastern North America are now and have historically been quite rare and of local distribution." While there is no doubt that this adequately describes the present situation, there is evidence to suggest that formerly this sea duck was more common there. Phillips (1925), Palmer (1949, 1976), and Todd (1963) clearly stated that numbers of Harlequin Ducks had declined over the periods they considered. Phillips (1925) supported his contention that Harlequin Ducks had declined considerably up to the early parts of the present century in Atlantic Canada by quoting Langille (1884) and Dresser (1871–81), who made reference to hundreds in specific areas of the maritime provinces. Downs (1888) considered them rather common in winter in Nova Scotia. References to New Brunswick may be interpreted as unclear; however, Herrick (1873) considered Harlequin Ducks common in winter in the late 1800s in the Grand Manan archipelago. Peters and Burleigh (1951) noted that the Harlequin Duck in Newfoundland had ". . . become much reduced in numbers during recent years. It has now become so rare that it should receive protection for all times." Peterson and Fisher (1955) observed ". . . hundreds of Harlequin Ducks . . ." at one site on Cape St. Mary's, an area that anecdotal information indicates to have supported thousands in winter.

Christmas Bird Counts (CBC) from 1979–80 to 1987–88 disclosed a pattern of decline for Cape St. Mary's, Newfoundland ($r = -0.701$; $P < 0.02$), and for Nova Scotia, where sightings have declined significantly since the mid 1970s ($r = -0.575$; $P < 0.02$) when those counts first incorporated sites such as Port Hebert, which consistently supported small numbers of wintering Harlequin Ducks.

The present scarcity of sightings of Harlequin Ducks in the Gulf of St. Lawrence may not be indicative of former numbers as Comeau (1909) noted rapid declines in numbers wintering near Pointe des Monts. Rowdon (1969), quoted in McNeil et al. (1973), believed that Harlequin Ducks were once fairly common on the Magdalen Islands. Significant winter concentrations (hundreds) were reported for Anticostic Island (Brewster 1884) for the 19th

1884) for the 19th century. Confusion exists because Ouellet (1969) quoted Schmitt (1904), who referred to the rarity of this species there in summer.

Harlequin Ducks had been more numerous in the coastal Maine area before the turn of the present century (Norton 1896; Knight 1897, 1908; Forbush 1912; Palmer 1949, 1976). Vickery (1988) speculated on a possible increase in Harlequin Ducks in the Maine area since Knight's (1908) report, yet it is doubtful that Knight's figures included Isle aux Haut, which represented 80% of Vickery's estimate of the current wintering population there. Longer term CBC data for Maine at areas frequented by Harlequin Ducks are limited to the York County site, and there is no significant trend there ($r = 0.207$, $P > 0.25$; for 1970–1985).

In recent years, observations of wintering Harlequin Ducks have been limited to a handful of sites in eastern North America, i.e., very inaccessible headlands, offshore skerries, and/or park reserves, all typical of wildlife refugia. This point was alluded to by Knight (1908) for the Maine area, and is especially important in light of the apparent abundance of wintering habitat in eastern North America.

Vickery (1988) concluded that the status of Harlequin Ducks wintering in eastern North America historically had been rare. This conclusion masked a pattern of decline noted by many of the authors cited. I believe that Harlequin Ducks were more numerous historically and have declined throughout this region. This decline coincided with the depletion of many migratory birds in the western Atlantic area. Within the same geographic area in which Harlequin Ducks were known to over-winter, the Common Eider (*Somateria mollissima*) was virtually extirpated. Its special recognition under the Migratory Bird Convention Act, i.e., Article IV (1917) may have overshadowed the plight of the poorly studied Harlequin Duck. Both Phillips (1925) and Palmer (1949) linked hunting, more than any other factor, to the decline of Harlequin Ducks in eastern North America, because this species has been noted for its relative tameness compared to other sea ducks (see Norton 1896, Bent 1925, Phillips 1925, Palmer 1976).

Harlequin Ducks likely were never as numerous as other sea ducks wintering in eastern North America, i.e., hundreds of thousands. Goudie and Ankney (1986) implied that small body size might confer a "disadvantage" to this species relative to the larger scoters and eiders. However, other small-sized sea ducks have relatively large populations in the same geographic areas (e.g., Oldsquaw [*Clangula hyemalis*]). Surveys systematically reporting numbers (statistics) were scarce up to the early 1920s, so it is difficult to estimate how large the eastern North American population of Harlequin Ducks may have been. Dresser (1871–81) reported one Harlequin Duck for every 20 longtails (Oldsquaws) in the Bay of Fundy. Langille (1884) and Peterson and Fisher (1955) recorded hundreds of Harlequin Ducks at specific sites in Nova Scotia and Newfoundland, respectively. An estimate of 5000 to 10,000 Harlequin Ducks does not seem unreasonable for the former population of this sea duck in eastern North America. Given that the present population is less than 1000 individuals, one must conclude that the present status is precarious at best, and may be at or near minimum viable population size (see Shaffer 1981, Salwasser et al. 1984, Reed et al. 1986).

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