analoga. In 1984 the actual prey items were almost the same as those taken during 1983, but *P. purpuratus* and *S. algosus* were equally represented in the stomach contents.

The size distribution of *S. algosus* consumed by Surfbirds (1983 sample) differed significantly from that found in the environment ($\chi^2 = 61.8$, df = 6, $P < 0.005$; test on absolute frequency of size classes, mussels >14 mm were pooled to avoid zero frequency cells). Medium-sized mussels, 6–12 mm in length, were frequent in stomachs, mussels in the length range 12–20 mm were rare, while those >20 mm were not found in stomach contents (Fig. 1A). *P. purpuratus* consumed during 1984 were mainly small-sized, 87.2% below 8 mm in length (Fig. 1B). Whole *S. algosus* and *P. purpuratus* were not found in the stomach contents of the 1984 and 1983 samples, respectively. Surfbirds foraging on mussel beds of *Mytilus californianus* and *M. edulis* on the coast of Oregon consumed mussels in the length range 2–10 mm (Marsh, Ecology 67:771–786, 1986), somewhat below the size range of mussels consumed in Mehuín.

Mussel shell strength increased exponentially with mussel length at the same rate in both species (F between slopes = 1.90; 1,95 df; $P > 0.1$), but *P. purpuratus* had stronger shells than *S. algosus* (F between adjusted means = 653.8; 1,94 df; $P < 0.001$).

The mussels *S. algosus* and *P. purpuratus* are the main prey of the Surfbird on rocky shores in Mehuín, Chile. The low frequency of consumption of other species suggests that they are swallowed incidentally, because most of them live on or among the mussels. The large number of small *P. purpuratus* consumed during 1984 (60% below 6-mm length) may have been swallowed incidentally because juveniles of this species recruit among the byssus of larger mussels (Moreno, Lunecke, and Lepez, Oikos 46:359–364, 1986).

Mussel species consumed by Surfbirds differ in their shell strengths, shells of *S. algosus* being more easily broken than those of *P. purpuratus* (Fig. 2). The same is true of byssuses of both species (pers. obs.). Although energy content of the mussels was not measured, the meat content of *S. algosus* is greater than in *P. purpuratus* of equivalent size (pers. obs.). These characteristics suggest that *S. algosus* is a more profitable prey than *P. purpuratus*.

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Historical breeding records of the Common Merganser in southeastern United States.—The Common Merganser (*Mergus merganser*) breeds throughout the forested boreal portions of the Holarctic Region (Vaurie 1965), but presently nests only sporadically south of New England in the eastern United States (AOU 1983). In routine curating of the egg collection of the Western Foundation of Vertebrate Zoology (WFVZ) and during visits to other major museum collections, I recently discovered evidence of a formerly more extensive southerly breeding range for this species in the United States.

A clutch (WFVZ 124,806) containing 9 eggs was collected at Bishop's Swamp, Mercer County, West Virginia, by David Willis on 19 May 1897. The set was acquired by the WFVZ from the private collection of Nelson D. Hoy of Media, Pennsylvania, who obtained

it from the J. Parker Norris collection, the largest turn-of-the-century egg collection in North America. According to the original data slip, the nest was 15 ft (4.6 m) high in a tree stub located a quarter of a mile from running water. The eggs are creamy-white, unmarked, subelliptical in shape, and have a smooth, almost oily texture. They average 64.5 (62.7–67.1) × 46.1 (45.1–47.6) mm in size. In all of these details they agree with the published descriptions of eggs of this species (Bent 1923, Palmer 1976), as well as with >100 other Common Merganser eggs in the WFVZ collection, but differ in color, size, and shape from the eggs of Wood Ducks (*Aix sponsa*) and Hooded Mergansers (*Lophodytes cucullatus*), the two other cavity-nesting ducks in the southeastern United States (Bent op. cit.). Hall (1983) listed the Common Merganser as an "uncommon migrant and winter visitant" in West Virginia, and he did not allude to possible breeding within the state. Since Hall (op. cit.) was unaware of any West Virginia specimens of the Common Merganser, this egg set fills that void.

There are no previously published breeding records for Tennessee. A set of 9 Common Merganser eggs in the Field Museum of Natural History (FM 5132) was collected by J. T. Overstreet in Smith County, Tennessee, on 28 April 1899. Incubation was recorded as "very little," and the nest was located in a cavity 15 ft (4.6 m) high in a cottonwood (*Populus* sp.) on the bank of a river. Average measurements of the existing 8 eggs are 61.9 (60.0–63.1) × 42.6 (41.4–44.5) mm, and they are creamy-white with a glossy texture. Two other sets of Common Merganser eggs from Tennessee are in the collection of the San Bernardino County Museum (SBCM). A clutch of 7 fresh eggs (SBCM 10628) was collected on 9 May 1898 in Smith County by James Jackson from "a hole in a tree." The eggs average 62.4 (59.7–64.0) × 46.5 (45.4–47.6) mm. The other set (SBCM 11,293) was taken by J. T. Overstreet in April 1898, also in Smith County. It contains 9 eggs which were fresh when collected from a cavity 10 ft (3 m) high in a cottonwood tree. The eggs average 66.2 (64.8–67.8) × 48.3 (47.4–49.4) mm. Both of the SBCM sets are creamy-white with the glossy, somewhat oily texture typical of Common Merganser eggs.

The WFVZ collection contains data cards for two additional Tennessee egg sets of this species, both collected by J. T. Overstreet in Smith County on 21 April 1897 and 30 April 1897, respectively. The 21 April nest contained 9 slightly incubated eggs and was located 18 ft (5.5 m) high in a broken limb of a beech tree. The 30 April nest contained 7 fresh eggs and was situated 7 ft (2.2 m) high in a hole in a cottonwood tree. Neither set was found in the WFVZ collection. Overstreet's original data cards suggest that he did not place any distinctive marks on the eggs. This unfortunate practice by some "oologists" frequently resulted in the loss of such specimens as they changed hands from collector to collector. However, in view of the existence of the data cards, the details on them which are compatible with valid nesting records in regard to clutch size, breeding dates, and nest locations, and the existence of the other Smith County, Tennessee, sets at the FM and SBCM, there is justification to regard the records as authentic.

Common Mergansers nested south to western Pennsylvania until the end of the 19th century (Warren 1890), and Todd (1940) mentioned a single breeding record from Presque Isle as late as 1933. Indeed, the species may still breed in New Jersey and eastern Pennsylvania (Boyle et al. 1980). Farther south, broods of Common Mergansers were observed in the Shenandoah Valley of Virginia during the breeding seasons of 1947, 1953, and 1954 (Jopson 1956), and a pair with at least one young of the year was reported at Dyke Marsh, Hunting Creek, Fort Hunt, Virginia, during June–July 1965 (C. W. Carlson et al. *in* F. R. Scott 1965). Brimley (1941) reported a brood of Common Mergansers in Chowan County, North Carolina, in May 1938. These records, as well as those from Tennessee and West Virginia, give more credence to the claim of Audubon (1838) that this species bred in Kentucky in the early part of the 19th century, an assertion rejected by Mengel (1965).

It is difficult to interpret whether these scattered, presently extralimital records are merely

anomalous, or whether in aggregate, they represent the last vestiges of a relict historical breeding range which may have extended southward along the Appalachian Mountains. Bellrose (1976) implied that instances of nesting by this species far south of its usual breeding range are fortuitous, and he cited a curious isolated breeding record from Chihuahua, Mexico, by van Rossem (1929) as evidence for this. Phillips (1926) and Palmer (1976) acknowledged that this species formerly nested well south of its present breeding range in the United States and suggested that it may have disappeared from such areas as a result of man-induced habitat losses. However, it seems unlikely that a northward retreat on such a broad front could be attributed wholly to a single cause. Furthermore, a similar trend apparently exists in Europe, where several isolated populations south of the present breeding range have also disappeared in recent decades (Phillips 1926, Cramp 1977).

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