of shallow wetlands may affect not only breeding waterfowl (Krapu, Auk 91:278–290, 1974), but other avian species such as Lesser Yellowlegs, Marbled Godwit, Willet, and American Avocet. Other less abundant or difficult to census species not included in our study may be among those most severely affected by drainage. The widespread drainage of private wetlands, including semipermanent ponds and lakes, threatens habitat important to a variety of bird species that either migrate through or nest in the northern great plains.

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Sexing Saw-whet Owls by wing chord.—Weir et al. (Wilson Bull. 92:475–488, 1980) present an analysis of the fall migration of Saw-whet Owls (*Aegolius acadicus*) at Prince Edward Point, Ontario. All owls with a wing chord ≤134 mm were designated males and all with wing chord ≥141 mm females. Those between 134 and 141 mm were classed as sex unknown (U). This method led to an unbelievable preponderance of identified males in the juvenile (HY) age class (Table 1). It seems grossly unlikely that juvenile males are extremely more abundant than females at Prince Edward Point because the sex ratio of identified adults (PHY) does not differ significantly from unity (Table 1). It is probable that the juveniles are not being sexed properly.

The sexing method is apparently based on the study of Earhart and Johnson (Condor 72: 251–264, 1970) who measured museum specimens and found a mean wing chord of 132.2 ± 3.83 mm for males and 139.2 ± 2.45 mm for females. The limits used by Weir et al. (1980) are approximately at the 95% confidence intervals from the means of Earhart and Johnson (1970) and thus should be a reasonable estimator of sex. However, Earhart and Johnson (1970) did not determine the age of their specimens and Mueller and Berger (Bird-Banding 38:120–125, 1967) have shown that juvenile Saw-whet Owls have significantly shorter wing chords ($\bar{x}$ = 136.5 mm) than adults ($\bar{x}$ = 138.5 mm). This age difference is 29% of the difference between means for the sexes given by Earhart and Johnson (1970) and 33% of the gap between sexes in the sexing method used by Weir et al. (1980). Mueller and Berger (Auk 85:431–436, 1968) have suggested that measurements of museum specimens may be shorter than those taken from live birds because of possible shrinkage in drying. Mueller et al. (Bird-Banding 47:310–318, 1976) have indicated that measurements probably vary with the method of measurement. Thus, it is not surprising that a further examination of the data of Mueller and Berger (1967), using the sexing method of Weir et al. (1980), yields a biased sex ratio for sexed adults but not for sexed juveniles (Table 1), the opposite of that found by Weir et al. (1980). A further caveat: an examination of the distribution of measurements used in Mueller and Berger (1967) reveals that an average difference of measurement of only 1 mm (0.8% of wing chord), due to slight, but reasonably consistent differences in measuring techniques, would change the sex identification of 11–14% of their sample from identified to unidentified or vice versa, but not from male to female. A 2-mm difference (1.5%) would similarly change the sex identification of 24–31%.

TABLE 1
SEX RATIOS OF SAW-WHET OWLS[a]

Year	HY males	HY females	U	χ^2	P
1976	46	16	35	14.5	<0.0002
1977	187	84	118	39.2	<0.0001
1978	54	23	46	12.5	<0.0005
Total	287	123	199	65.6	<0.0001
M and B	43	30	27	2.3	>0.10
Year	PHY males	PHY females	U	χ^2	P
1976	36	30	26	0.6	>0.45
1977	62	49	52	1.6	>0.20
1978	55	57	68	0.0	>0.95
Total	153	136	146	1.0	>0.30
M and B	16	30	22	4.3	<0.05

[a] Data from Weir et al. (1980) except for M and B which are from the sample used in Mueller and Berger (1967). Chi-square compares observed values with a 1:1 sex ratio.

Edwards, Weir and Stewart (Wilson Bull. 94:555–557, 1982) present calculations which suggest that if one considers the proportions of males and females in the unidentified category, the sex ratio of the total sample does not differ from unity. Their analysis evades the central issue of age differences by combining the age groups. If we use their estimates of the proportion of unidentified birds that are males (29%) and females (71%), apply this separately to the two age groups, and add the numbers of birds that were sexed, we obtain the following: HY: males—345, females—264, $P < 0.002$; PHY: males—195, females—240, $P < 0.04$. We have, thus, significantly biased sex ratios in both HY and PHY. This strongly suggests that the sexing method of Weir et al. (1980) is not sufficiently accurate for either age group.

We need data from a sufficient sample of known-age, known-sex Saw-whet Owls to establish a reasonable estimate of the true means, standard deviations, and hence the 95% confidence intervals for determining sex. The method of measurement should be described in detail. At present, we do not know the accuracy of the sexing method used by Weir et al. (1980).

Weir et al. (1980) conclude that Saw-whet Owls show sexual differences in the timing of migration. On the basis of the evidence presented above, it appears that their conclusions may be inconclusive.—HELMUT C. MUELLER, *Dept. Biology and Curriculum in Ecology, Univ. North Carolina, Chapel Hill, North Carolina 27514.* *Accepted 20 July 1982.*

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Comments on sexing Saw-whet Owls by wing chord.—Mueller (Wilson Bull. 94:554–555, 1982) feels it unbelievable that there are more identified males than identified Saw-whet Owl (*Aegolius acadius*) females in the work by Weir et al. (Wilson Bull. 92:475–488, 1980). However, it is entirely expected from the data of Earhart and Johnson (Condor 72:251–264,