

## FROM FIELD AND STUDY

**Longevity Record of Gambel White-crowned Sparrow.**—An immature Gambel White-crowned Sparrow (*Zonotrichia leucophrys gambelii*), band number 41-80551, was originally banded by me at my home in Altadena, California, on November 22, 1942. This same bird returned most recently on March 5, 1950, having at that time attained a proven life of almost eight years.

After its original capture, the bird repeated at my banding station 12 times until March 18, 1943. It returned on December 12, 1943, and repeated once, on January 3, 1944. It returned on November 26, 1944, with no subsequent repeats that season. It again returned December 8, 1945, and was recaptured three times during the ensuing 40 days. The next return, on November 19, 1946, was followed by 23 recaptures ending February 9, 1947. Its fifth return was on December 14, 1947, followed by five repeats until April 18, 1948. The last two returns, on January 9, 1949, and March 5, 1950, were single captures in each season.

Out of 848 birds of this species banded between the fall of 1941 and the spring of 1946, this is the only individual with a proven length of life of over five years.—FRANKLIN G. CRAWFORD, *Altadena, California, May 31, 1950.*

**Voice Differences Between Sexes in the American Coot.**—The American Coot (*Fulica americana*) exhibits no sexual dimorphism in plumage characters and although the males average about seven per cent larger than females (Engels, *Jour. Morph.*, 62, 1938:599-607), this size difference is usable in the field only when both members of a pair are observed side by side. Otherwise, reliable size comparisons can not be made. I have found, however, that the sexes can be recognized by differences in voice.

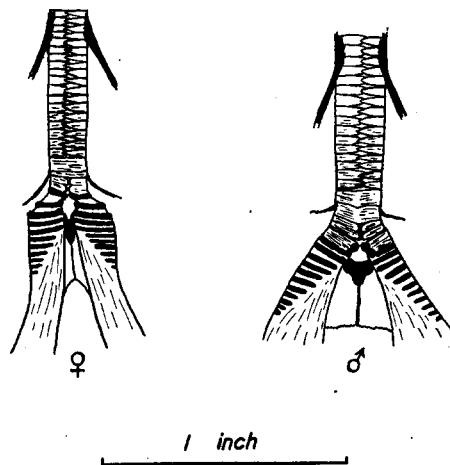


Fig. 47. Sexual dimorphism in the structure of the syrinx of the American Coot.

Soon after commencing a study of the breeding behavior of two pairs of coots on Jewel Lake, Tilden Regional Park, Contra Costa County, California, I noticed that the smaller birds uttered a series of notes quite different from those given by their larger mates. As the study progressed, it became necessary to mark the birds with neck dangles in order that individual birds could be distinguished. With this marking, and a series of measurements to confirm the apparent size differences, it was definitely established that a consistent difference existed between the notes of the large and small birds.

With the difference proved, it became necessary to ascertain which sex gave which series of calls. This was accomplished by confining a flock of coots on a small pool on the University of California campus at Berkeley. Some of the confined birds were sexed by means of a laparotomy and tagged with neck dangles, while other tagged birds were observed and later killed and sexed. In all, about

50 birds have been confined in this study. In addition, ten birds, sexed internally and tagged, were released in natural populations.

Subsequent observations on these tagged birds of known sex, both in the field and in captivity, have shown the original observations to be correct and that sexes can be distinguished in the field with complete accuracy on the basis of voice.

Anatomical studies of more than 60 birds, about evenly distributed for sex (but of unknown age), have shown a consistent difference in the size and shape of the bronchial syrinx characteristic of this species. The accompanying diagrams (fig. 47) illustrate these differences.

The voice differences are less readily indicated. Basically, the female gives a call with a nasal quality whereas the male note invariably lacks the nasal quality. Generally the female calls are at a somewhat lower pitch than the corresponding male notes.

The most readily distinguished notes are their "attention" and "challenge" notes. The former consist of the clear *puhkk* of the male and the nasal *poonk* of the female. The latter consist of a crowing *kuh-kuh-kuh* from the male and a cackling *cack-ka, cack-ka* from the female. On other occasions the male gives a single *puhkk-uh* or a *puhkk-uh, puhkk-uh, puhkk-up, uhk, uhk*, the female a *punk-unk*. During times of tension the male gives a nervous *puhkk-cow-ah* while the female gives a *coo-ah*. Other notes have been recorded, a few of which have not been well enough studied to determine the corresponding note of the other sex. However, these least known notes are seldom given, or are given only in connection with courtship or care of the young.

In no instance has the same note been heard from both birds of known pairs nor have I wrongly identified notes of birds whose sexes later were determined.—GORDON W. GULLION, *Museum of Vertebrate Zoology, Berkeley, California, April 5, 1950.*

**A New Race of Mountain Chickadee from the Utah-Idaho Area.**—Comparison of several series of the Mountain Chickadee (*Parus gambeli*) collected by the writer in recent years in Utah with specimens on loan from surrounding areas has led to the conclusion that the population of Utah, southern Idaho and southwestern Wyoming differs from those of *P. g. inyoensis* of the Great Basin to the west, *P. g. grinnelli* to the north, and *P. g. gambeli* of the Rocky Mountains to the east and southeast. This population may be described as follows:

#### ***Parus gambeli wasatchensis*, new subspecies**

*Type*.—Adult male, no. 9203, Univ. Utah Mus. Zool., taken at Silver Lake Post Office (Brighton), 9,000 feet, head of Big Cottonwood Canyon, Wasatch Mountains, Salt Lake County, Utah, on September 29, 1946; collected by William H. Behle, orig. no. 2985.

*Subspecific characters*.—Closest to *P. g. inyoensis* but distinguished from that race by having the dorsum a darker color with a less grayish tone. Compared with *P. g. gambeli*, dorsum paler, less brownish; bill longer, narrower and more tapering. Likewise differs from *P. g. grinnelli* in having the dorsum lighter, with the bill longer, narrower and more attenuated.

*Measurements*.—Twenty-seven males: wing 73.3-67.7 (70.4), tail 68.7-59.7 (63.7), bill length from nostril 9.4-8.0 (8.5), depth of bill at base 4.0-3.0 (3.5), width of bill at anterior margin of nostril 4.4-3.2 (3.8). Twenty-four females: wing 69.0-64.5 (66.6), tail 65.8-58.4 (60.8), bill length from nostril, 9.2-8.0 (8.5), depth of bill at base 4.4-3.0 (3.3), width of bill at anterior margin of nostril 4.5-3.2 (3.7).

*Geographic range*.—The mountains of central and southern Idaho, southwestern Wyoming and all of Utah except along the western margin of the state.

*Specimens examined*.—IDAHO. Valley County: 5 miles east Warm Lake, 7,000 feet, 1 (July); 5 miles west Cape Horn, Sawtooth Range, 1 (July). Adams County: 3 miles west Payette Lake, 5,400 feet, 3 (July). WYOMING. Uinta County: Fort Bridger, 6,700 feet, 1 (September). UTAH. Summit County: Smith Morehouse Creek, Weber River, 1 (October). Duchesne County: 4 miles up Brown Duck Canyon, northwest Moon Lake, 9,000 feet, Uinta Mountains, 2 (September). Uintah County: head of Ashley Creek, 9,500 feet, near Trout Creek Park, 20 miles northwest Vernal, 6 (September). Davis County: Bountiful Peak Picnic Ground, 8,500 feet, Head of Farmington Canyon, 1 (November). Salt Lake County: Silver Lake P. O. (Brighton), 8,750 feet, head of Big Cottonwood Canyon, Wasatch Mountains, 23 (June, August, September); Bell's Canyon, 7,800 feet, 18 miles southeast