

FROM FIELD AND STUDY

Observations of Behavior of the Andean Torrent Duck.—Most members of the family Anatidae are notably cooperative subjects for ethological study, but the Andean Torrent Duck (*Merganetta armata*) has never been analyzed from a behavioral standpoint. Since this species has not survived in captivity (Delacour, *The Waterfowl of the World*, 1956), and since it inhabits the relatively inaccessible white-water rivers of the Andes, observations of it have been few.

As a member of the University of California Botanic Garden's Seventh Expedition to the Andes, I traveled widely in northern Perú during 1964. We explored several rivers of the Pacific slopes and the upper Amazon drainage, but *Merganetta* was seen on only three occasions. On the evening of April 11 a single drake was seen flying along the Río Utcubamba at Leimebamba, 2150 meters altitude. The river at that point tumbles among shore-line boulders and is only about four meters wide. Farther down river a duck and a drake were encountered on June 24. The river at this location (1900 meters in altitude) was about ten meters wide and still quite turbulent. In mid-stream the drake pursued the duck and made several attempts to grab the feathers of her back with his bill. Mounting was attempted, but the chase ended abruptly when the pair saw me standing only three meters away on the river bank. The duck immediately submerged. No forward diving motion was discernible. She simply sank out of sight on the spot. The drake held his position against the current for several seconds until the duck reappeared about forty meters upstream. She had covered this distance out of sight, apparently underwater, and now shot from beneath the surface to become immediately airborne. Both birds flew upstream and disappeared from view.

In the afternoon we returned to the same location, and this time two drakes and a duck were present. The drakes maintained a remarkable, upright posture while facing each other in the turbulent river. The duck, in normal swimming position, moved downstream much more slowly than the current. She did not swim directly away from the displaying drakes but moved off at an angle, turning her head slightly to the right to view the combatants.

The efforts of one drake to reach the duck were frustrated by the other which successfully maintained his position between the two and never allowed the aggressor to approach more closely to the duck than two meters. The drakes remained bolt upright, breast and most of the belly clear of the water, the neck stretched up and the bill pointing skyward almost 90° above the horizontal. While in this position and about half a meter apart, both drakes rapidly but rhythmically bobbed their heads while keeping the bill in a vertical position. After almost two minutes of such display, the drake, which I considered to be the aggressor, swiftly turned, leaped into the air, and flew upstream. The remaining drake moved to the side of the duck, and both swam downstream.

During their encounter the drakes did not obviously display their wings nor use them in combat, and no vocalization could be heard above the sound of the river.—J. KENNETH WRIGHT, *Museum of Vertebrate Zoology, Berkeley, California, March 1, 1965.*

"Flightlessness" in the Dipper.—Certain aquatic birds which can elude their enemies in the water are known to drop all their remiges at the same time (Van Tyne and Berger, *Fundamentals of Ornithology*, 1959:94). Among these birds are waterfowl, grebes, most rails, and many alcids. This phenomenon was unknown among passerine birds until Balat (*Zool. Listy*, 9, 1960: 257-264) in a three-year study of a marked population of the European Dipper (*Cinclus cinclus*) found a short period in which the bird is unable to fly. During an ecological study of its congener, the American Dipper, *C. mexicanus*, a few observations have been made which suggest that a similar event occurs in this species.

From August 16, 1964, to August 30, 1964, three banded adult Dippers were encountered in a "flightless" condition. Two of the three birds were run down and captured by hand. Four days after the initial capture, R. S. Hoffmann and I were able to run down and capture one of these birds a second time. The third Dipper was capable of longer flights and was captured with a fish net. Remiges 2 to 6 were extremely short in all of these "flightless" birds; this agrees with Balat's findings in *C. cinclus*; remiges 1, 7, 8, 9, and 10 are retained for an undetermined period. The rectrices were extremely short, and all appeared to be dropped at once. One of the Dippers was