



Sharp-winged Teal

boenus megalopterus) and also an interesting Woodpecker (*Colaptes rupicola*), which lives entirely in walls and banks and on the ground, as there are no trees at all in this region. The Glossy Ibis (*Plegadis ridgewayi*) was in evidence near the villages and exceptionally tame, and on a lake near Viacha, we saw one pair of the Andean Crested Duck (*Lophonetta specularioides alticola*) the only pair that we saw during the trip. The only duck of the 'puna' that we missed was the large mountain form of the Cinnamon Teal (*Anas cyanoptera orinoma*). Not one could we find.

THE ZONGO

The main objective in Bolivia, however, was to see the Torrent Duck (*Mergetta armata*) which lives in the waterfalls of the Andean rivers. For this purpose we travelled over a 16,000-foot pass near the great mountain Huaina Potosi. Near the top of the pass is a tin mine and on the lake just below it we saw a small flock of seventeen Andean Geese (*Chloephaga melanoptera*), swimming far out on the still water. Over the pass we followed a road which leads down the River Zongo upon which we finally found a group of five Bolivian Torrent Ducks (*M. a. garleppi*). The details of the exciting encounter with these obscure and fascinating birds are described in the paper which follows.

BEHAVIOUR OF THE BOLIVIAN TORRENT DUCK

By Peter Scott

THE River Zongo is one of the sources of the Madeira, a main tributary of the Amazon. It rises in the high Andes of Bolivia about forty miles E.N.E. of La Paz. A hydro-electric scheme on the river supplies electricity to the capital.

A road winds over the pass at a height of 16,000 ft. and follows the river in its steep descent down the deep cleft of the valley. At about 9000 ft. the tree-line appears and

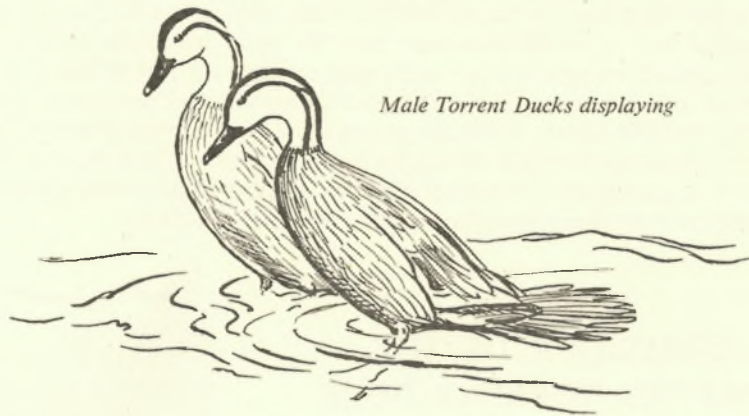


below this the forest rapidly becomes tropical with tree ferns, a brilliant flora, and humming-birds. The valley echoes with the roar of the river which is a continuous series of cascades and waterfalls, about fifteen yards wide, the water clear and greenish blue.

The only Torrent Ducks we found were about two or three hundred feet below the tree-line.

The first view we had of them was from the window of a *Camionetta* (truck). As we curved round the mountainside I thought I caught a glimpse of an upright bird on a stone in mid-torrent. At the next corner we were directly above the spot. Looking down I could see a male and two females sitting on a reddish-brown rock in the middle of the stream. They were about thirty yards almost directly beneath us. As soon as we stopped the car and peered over at them they began to swim downstream with quick nervous head movements.

First impressions were that they were surprisingly like what we had expected. The most striking unexpected feature, however, was the colour of the bill, which is the brightest possible cherry red, with pale yellowish nail in both sexes. The females were very rich chestnut red (pale) on the chin and underparts, the rest dove grey. The males were spotted and streaked with dark brown on a light-grey ground, both above and below, the ground colour on the back being more yellowish. The white head with black lines was most beautiful. In a few moments they had swum out of sight downstream, stopping frequently on stones and swimming down or across waterfalls with the greatest ease.



Male Torrent Ducks displaying

A little way upstream were two more drakes, standing on a green slippery stone in mid-stream. After a few moments they flew, one after the other, upstream. They did not go far as they failed to reappear at the next corner.

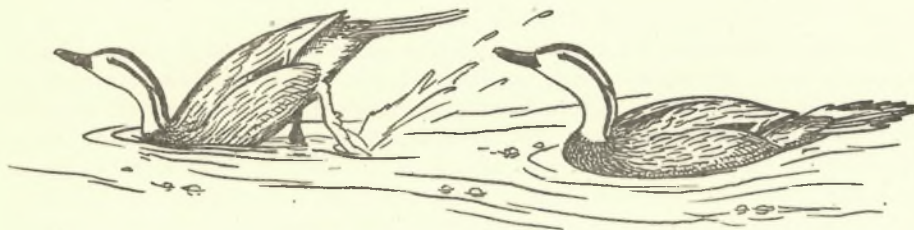
The locals reported more farther upstream, and we made the mistake of driving on in the car about two kilometres, instead of staying with these ducks while the light was fairly good. By walking down beside the river we established that no Torrent Ducks were present until we returned to the place where the two males were once more standing on their rock, and once more they flew a short distance up. As they took off the individual tail feathers were separated and gave a very 'scrawny' look from behind. The Indian with us volunteered to go back and drive them downstream which he successfully did. One male flew downstream at once, passing below us, and showing its speculum prominently. But for the tail the bird in flight might have been a typical dabbling

duck. The second male swam down in front of the Indian—crossing waterfalls where I filmed it. Finally it also flew downstream below us. As we followed we came suddenly upon all five Torrent Ducks (probably the only ones on this stretch of river).

As soon as they saw us they all hopped into the water and swam about nervously, landing on rocks and then hopping in again. They were about seventy yards away (mainly below us). When they stood on the rocks the head was jerked forwards, the bill above the horizontal and often partly open. A call was just audible above the sound of the waterfalls, and might be described as 'keech.' Phillips¹ states that no one has previously heard any sound from a Torrent Duck. While the birds were nervous the call was being repeated almost continuously. It is evidently of a fairly high frequency.

We stood at the edge of the road filming them (although the sun had gone out of the deep valley and the light was very poor). After ten minutes, during which they played in the pool below, leaping out and running up the waterfalls (as Mergansers run over the water) and running along the tops of the rocks with an easy gait (slightly reminiscent of *Chenonetta* in its ease and complete lack of body movement), the five Torrent Ducks appeared to be satisfied that no danger threatened, and four of them (two pairs) withdrew to a patch of rapids and began to display. By now the light made ciné-photography with the telephoto lens quite impossible. The fifth Torrent Duck, a male, sometimes joined in—and may, indeed, have stimulated the display in the first place.

Two notable features of the behaviour occurred frequently. The first was when two males (once all three) raised themselves up by treading water and using the tail as 'surf-board,' in order to maintain the body in a near vertical position. The neck was then arched and the bill pointed downward at an angle 50°-60° to the horizontal. The two males were side by side during this display and one usually circled upstream of the other, crossing the current ahead of it, the other revolving so as to keep sideways-on to his rival. I could not establish that the female had any fixed relative position in this manoeuvre. The second movement occurred when the birds were swimming head to current. One would pass ahead of another, and with a quick, rather comical, jump would flick the whole of its hindquarters in front of its rival and throw out a small jet of water into the other bird's face. The water is thrown up in much the same way as it is in the display of the Goldeneye. During this display the wing is slightly open and the speculum shows plainly. This was most commonly done by one drake in front of another, but on two occasions I saw



Male Torrent Ducks displaying

¹ J. Phillips. A Natural History of the Ducks. Vol. IV, p. 214.

a female kick up in front of another female. The displays went on for between thirty and forty minutes, and all this time they were quite oblivious of the observers. From time to time one or other of the party would rest on a rock. Several times a male made his way on to a submerged rock over which the water was rushing. Here he stood with the water halfway up his body. It was amazing how he could stay there with so strong a current sweeping over the rock (which was covered with slippery weed as well).

The females landed on a rock on the far shore several times, but the splashing display went on in their temporary absence.

Sometimes a bird would fly up from the water on to a rock or to the pool above. The take-off was very steep, with no 'pattering' across the water. The landing was made after near-hovering flight. It is quite evident that the wing-loading is as low, if not lower, than in normal dabbling ducks. Since the bird is not 'batwinged' as in *Dendrocygna*, the wings must, in fact, be quite long, but when at rest the very elongated body and long tail give a misleading impression of the wing length.

The plumage of the male in this race is extremely smart. The black lines on the white head are sharp and extremely handsome. The edge of the streaked plumage of the body is quite sharply defined at the base of the neck. The streaking (and the wing speculum) are not unlike those of the Mallard. When one male bird was sitting on a rock I thought that without head and tail, the body would pass as a strongly marked rather grey female Mallard.

The legs are a dull dark red (in both sexes) with blackish webs, the bill is an amazingly brilliant scarlet lake—less orange than pillarbox red (also in both sexes). The iris of the male appeared black at that range; that of the female was not carefully noted. It was not obtrusive, but may have been lightish brown, for the eyes did not look strikingly dark, as they probably would have done against the pale soft grey of the face if the iris colour had been dark brown or black.

The tail feathers are a notable feature in both sexes. The tail is carried in the water and each feather lies quite separate from its neighbour for the outer half of its length. It is an untidy looking appendage, but balances the bird gracefully.

On the following day we hoped to be able to film the birds again in improved light, when the tropical sun was almost overhead. But we could only find one female at first. When she saw us she jumped out on to a rock and ran nervously up and down jerking her head forward. After a few minutes she returned to the pool and resumed diving (presumably for food). On returning to the surface she jumped out on to a rock under the overhanging far shore. After ten minutes of very long dives she disappeared and must have used some rock under the near shore and out of sight of us. We did not see her again.

Walking downstream we came upon a pair some eighty yards away. They began to move upstream—mostly walking on the rocks, but often swimming up over the white water. Before I could get more than a short movie shot of them running along a boulder, they disappeared round a corner. Soon after disappearing they must have flown upstream, as three minutes later we were stationed above and below the hidden corner, but, after more than half an hour, our Indian had followed the stream between the two lookout places and no further trace of the Torrent Ducks was found.

In spite of this disappointment, we had had more than our fair share of good luck on the previous day when we had spent so long watching these fascinating and mysterious birds.