

**The Following Reaction in a Brood of Mute Swans.**—On July 4, 1955, S. von Hofsten and I were observing a Mute Swan (*Cygnus olor*) and its brood of 3 cygnets about 3 or 4 days old at Ekebysjön, a few miles outside Stockholm, Sweden. For over half an hour we watched them and many other waterfowl from the north shore of the lake at a distance of about 200 feet. We then moved over to the other side at about the same distance from the swans.

After a while the parent, followed by the cygnets, swam away from the shelter of the reeds where they had been feeding. Arrived opposite the place where we stood, the swan suddenly rose and flew out of our sight to the western end of the lake some 1500 feet away, leaving the cygnets exposed and alone in the middle of the water.

At the disappearance of the parent, the cygnets at first swam around in confusion, giving loud "lost piping" notes. A minute later they bunched together, their "lost piping" gradually subsiding. Very soon we saw them in string formation paddling off in precisely the direction the adult swan had flown. They swam on and on, undismayed by the other waterfowl, unswerving in their course through tongues of lily-pads and sparse growth of reeds straight toward the west end of the lake.

To us it seemed impossible for the cygnets, floating low upon the water and with water-lilies and reeds intervening, to see their parent once it had alighted on the lake. Nor could we, from where we stood, hear either the parent or the young giving any calls.

The first three reactions of the cygnets upon being abandoned, their "lost piping," their confusion, and their bunching together, were common enough. This behavior pattern agrees with the findings of Drs. Tinbergen, Lorenz, Fabricius, and others, in their experimental work on ducks.

More remarkable was the orientation of these cygnets as they moved off on a determined course through rather formidable obstacles for such tiny swimmers towards a distant, presumably invisible, parent object. Obviously, they were driven by a high intensity motivation which was released by a visual stimulus no longer perceivable by the senses. We may also ask, was the impulse to follow present in only the leading cygnet, or to a higher degree in it than in the others? Or was the whole performance cooperative?

Fabricius and Boyd in "Experiments on the Following Reaction of Ducklings" (Wildfowl Trust Annual Report 1952-53) remark on the "complexity and variety of the interactions between different processes that make up even a simple behaviour pattern" and on the great variation of response in individuals "with similar histories," such as this brood of cygnets. It would seem, therefore, that nature may often provide the necessary relieving circumstances, as in this case, whereby apparently desperate situations in the wild can be successfully resolved.—LOUISE DE KIRILINE LAWRENCE, *Rutherglen, Ontario, Canada.*

**Behavior of a Pratincole.**—During the fall and winter of 1954 and the spring of 1955, I had an opportunity to observe some hostile behavior patterns in an Oriental Pratincole (*Glareola maldivarum* or *G. pratincola maldivarum*) at the New York Zoological Park.

This bird was kept in a small aviary, with many passerines (mostly estrildine finches) and a few larger birds (such as sandgrouse and quail).

Various disputes and fights were not uncommon in the aviary. The pratincole was remarkably sluggish when left alone; but it was vigorous in attempting to maintain an "individual distance" area around itself, within which it would not