

THE WALKING OF THE FULMAR PETREL.

BY
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"CAN any of the Petrels walk on the toes? I think not, and believe that all the pictures in Saunders's *Manual*, with the exception of the one by Mr. G. E. Lodge, are incorrect, as I fear are the pictures from Lilford of . . . and the Fulmar in the background. . . ." Thus Mr. T. A. Coward (1926) ⁽¹⁾ sums up the question of the walking of Petrels, and on the information then available the conclusion was justified. There are of course many set-up specimens in museums and collections whose accuracy is at stake as well.

Last year (1928) I made a detailed study, which I hope to complete this year, of the Fulmar Petrel (*Fulmaris g. glacialis*) during the breeding season on the coast of Durham. In all, I visited the Fulmars between 45 and 50 times during the season and have had them under observation at all hours of the day and night. I have therefore had many opportunities of watching the method of walking of these Petrels. During my observations I have established that the Fulmar Petrel *can and does*—on occasion—*walk on its toes*. Yet, looking through my notes, I find only five records where there was no shadow of doubt as to their being on the toes of both feet. It will thus be seen that this walking on the toes is of rare occurrence, and unless a would-be verifier of my observations is prepared to undertake extended watching, he is as likely as not to return with negative evidence. In view of this, I feel that more than mere mention of the occurrence is necessary. I have therefore given my observations in full. I would like to mention here that I write all my records in full in the field within a few minutes of making my observations.

The Fulmar's normal and usual method of progression on land is to walk on to the whole length of the tarsus and in this manner I have seen them attain a slow run on a level surface. When moving from one elevation to another they are rather clumsy and seem content to fall a few inches from one ledge to the next, sometimes using the wings as props.

The following are the records of the occasions on which I saw Fulmars on their toes. All the dates refer to 1928.

1. May 20th: I saw both birds of a pair walking about their ledge on their *toes* and in this manner change places. Later, one of them stood up on its toes and stretched one wing, after which it subsided again on to the tarsi. Afterwards nest-building was started by this bird.

⁽¹⁾ T. A. Coward, *Birds of British Isles*, III., p. 235,

2. May 22nd: I was watching a pair on the same ledge as above when a third Fulmar settled beside the other two, and in the excitement that followed one of the original pair walked about on its toes, though not very high.

3. June 3rd: One of a pair on a different ledge from the above walked past in front of its mate on its toes, but again not very high up. Its gait seemed of a rather waddling nature. I could see no cause for excitement and this pair slept for the major portion of $1\frac{1}{4}$ hours after this incident.

4. June 3rd: Not far off I saw a single Fulmar making a tour of inspection of its ledge. Most of its walking was done on the toes, though it subsided into a resting position every few steps. I made a sketch of about the average number of degrees of the tarsi from the horizontal when the bird was walking on its toes. On measurement this gives an angle of 30° , but this is only very approximate.

5. July 8th: I was again watching a pair on the first-mentioned ledge. They were calling a little to one another at intervals, when a third Fulmar settled beside them; there was then much calling on the part of both of the pair, and one of the pair stood up with its tarsi at an angle nearing the perpendicular, one tarsus being a *little* nearer the perpendicular than the other. A little later the same bird stood up again just as before *and in this position* it called from side to side with its neck outstretched, apparently quite steadily and then, so far as I could see, without subsiding at all it opened its wings and flew off from this upright position. A sketch of the angle of the tarsus gives 83° from the horizontal.

When watching a brooding Fulmar with a young one about three days old, the brooding bird stood up with her tarsus almost perpendicular and her breast considerably higher than the horizontal. The young bird was brooded between the legs and when the parent settled down I saw that, though the parent's chest was resting on the ledge, the tarsus was considerably above the horizontal (measurement of sketch gives 50° from horizontal), and with the tarsus in this position the brooding bird would doze, every now and again either raising its body up and settling down again or just raising the tail end whilst the chest remained on the ledge. Four days later I was again watching this brooding bird. It was brooding with its bill under its scapulars and raised itself on to its toes and I noted that the young one—whose head was between the brooding bird's tarsi—was preening itself. Though the brooding bird stood up like this on its toes for a little while,

it did not remove its bill from under its scapulars. In these instances of the brooding bird standing on its toes I could only see the tarsus on the near side, the other being hidden by the young bird, but the position of the brooding bird left little doubt that it was standing on the toes of *both* feet and not leaning on anything on the far side.

When the young Fulmar referred to above was about four or five weeks old, I noted that when it was moving about the ledge its walking was strictly on the tarsus, its legs seeming to be weak. Its walking was sometimes aided by its wings.

On other occasions than those cited above I have seen what was probably walking on the toes, but unless the conditions for observation are favourable it is not easy to make absolutely certain that the Fulmar is standing on the toes of both feet. One instance where I made all but certain was rather interesting in that it was an arriving bird instead of one of the pair that stood on its toes. I was watching a pair from above at a distance of about 4 ft. Another Fulmar persistently landed on the steep bank leading down from the ledge and sometimes would come running up with its wings half open and apparently on its toes. Each time it was sent off by one of the pair.

There is usually great excitement when a pair of Fulmars is joined by a third Fulmar; they also become very excited during nest building.

The above observations show, firstly, that the Fulmar Petrel can and does walk on its toes though only infrequently, and secondly, that sexual excitement, *i.e.*, nest-building or intrusion on a pair by an alien, is the most usual cause of their so doing.

Mr. G. Gillett,⁽¹⁾ when writing on the Fulmar says: "When placed on deck is quite unable to rise or even to stand upright, but shuffles along by the help of its wings." This I take it is a Fulmar under stress of fear or bewilderment. Mr. Coward⁽²⁾ has noted a Manx Shearwater "confused" in a somewhat similar manner.

On land, then, the Fulmar may be considered to have at least three modes of progression: (a) Its normal method on the tarsus; (b) on its toes, usually due to sexual excitement and only infrequently used; (c) a shuffle with the aid of its wings under stress of fear or bewilderment.

(1) G. Gillett, *Ibis*, 1870, p. 307.

(2) T. A. Coward, *Birds of British Isles*, III., p. 232.