

streaks and a few small spots. The upper parts generally were mid-brown, with the small feathers of the wing-coverts and back with blackish centres and buff margins. The crown of the head was light chestnut with a pale creamy stripe over the eye. In flight the rump and tail were dark with white sides to the rump. No pale bar was noted on the dark wings. The dark bill was approximately head length and the legs were dull yellow with a greenish tinge. It later flew a long distance up the creek, uttering as it rose a well heard "Chrring".

During the 1967-1968 wader season I first observed this species on December 30, 1967. In a weed covered, muddy corner of the Golf-links Swamp, Altona, I flushed a small group of waders, mostly Sharp-tailed Sandpipers, and among the calls I heard the distinctive notes of Long-toed Stints. The main notes resembled short bursts from a bicycle bell, such as "Trring" or "Trrng". Calls resembling "Chirr" and "Kreect" were also heard. I estimated, from calls, that about six Long-toed Stints were in the flock. Shortly some of the waders came back and settled down to feed. This gave me the opportunity of seeing three of the Long-toed Stints at close range. All were in greyish "winter" plumage, the legs showing greenish-yellow.

At the same swamp on January 10, 1968, there was a single bird, and at the Werribee Farm on February 24, 1968, two more Long-toed Stints were heard. One of these, a bird largely in breeding plumage, was located as it fed on a muddy, vegetated islet, in one of the treatment ponds.

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Dusk Ascent of Fork-tailed Swifts

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Because Fork-tailed Swifts, *Apus pacificus*, are of only irregular occurrence on the Mornington Peninsula in Victoria, the appearance of large numbers in the Frankston district on March 10, 1969, produced some excitement among local bird watchers. Several casual observations of Spine-tailed Swifts, *Hirundapus caudacutus*, had been made during previous weeks, and a large flock had been seen near Frankston on March 9, but the first Fork-tailed Swifts were identified on the 10th. A north-easterly movement was first noticed at approximately 08.00 hours by Gregory Hall who continued to see the birds in various parts of the district throughout the day. In the late afternoon he drew the attention of Lindsay and Christopher Corben to the presence of the now practically stationary flocks although some north-easterly movement was still suspected. A telephone call at 18.00

hours informed me of the presence of the Fork-tailed Swifts and as I could see no Swifts over the coastline near my home, nor over Port Phillip Bay, I joined the other observers at the Corben home one-and-a-half miles inland, at the foot of the hill which rises gently to Mt. Eliza.

There was a small loose flock of Fork-tailed Swifts in this area. Only two Spine-tailed Swifts were seen. If they were feeding, it was in a very casual and inconspicuous manner. Flight was leisurely and there was much gliding on stiff, apparently motionless wings. The majority were flying at between 60 and 100 feet above ground level. A tree of known height facilitated accurate judgment of the lower level. A few were much higher, perhaps up to 400 feet.

Whilst watching this flock I twice witnessed a pattern of flight behaviour somewhat similar to that described by Simpson and Noonan (1967) for the Spine-tailed Swift. The birds appeared to free fall vertically, or nearly so, for about 10 feet, the wings lying back along the body, fluttering, suggesting limpness.

When I studied the European Swift, *Apus apus*, in England between 1953 and 1960, I several times observed a similar habit which I termed "shuttlecocking". I formed then the opinion that the birds relaxed and rested briefly during these free falls and by this means avoided the necessity to perch in order to roost like other birds. The evidence that Swifts normally spend the night on the wing was, by that date, very convincing. Lack (1956) discusses in detail the flight and nocturnal habits of swifts, but surprisingly does not mention this aspect of flight behaviour which, from my observations, is not of particularly unusual occurrence in the European Swift, especially at dusk. I would, however, consider a drop of more than ten feet as unusual in the European Swift, whereas Simpson and Noonan (1967) describe drops of 100 feet for the Spine-tailed Swift.

It is probable that most birds take their "sleep" in short spells. The constant twittering at communal roosts of Starlings, *Sturnus vulgaris*, and other birds is evidence of lack of continuity of "sleep". Swifts would not be the only birds to spend long periods on the wing if the records of albatrosses following ships for several days are to be believed, (Murphy, 1936 and Alexander, 1955). In fact it is difficult to comprehend how the numerous sea birds which live in the oceans of the roaring forties might ever achieve the peace which we would regard as necessary for "sleep".

Simpson and Noonan considered it likely that the diving behaviour of the Spine-tailed Swift was a display flight and perhaps a component of aerial courtship activity. I would suggest that a more acceptable explanation of the function of these apparently *uncontrolled* dives is relaxation. This should not be confused with *controlled* steep diving and swooping such as that which forms a part of the evening flights of European Swifts over their breeding haunts, especially just prior to entering nesting cavities to roost.

We had been watching the flock for about half an hour when the birds drifted off in a northerly direction and disappeared. However, from our vantage point we could see two other groups of Swifts, both also frequenting the gently sloping hillside. It may be significant that no Swifts were visible over the low-lying coastal plains to the north, and I had seen none over the coast or out to sea during that afternoon.

I then stationed myself on the coast at Olivers Hill, which provided a good observation point, to watch two parties which were hawking at tree-top height a little to the north-east.

After the visible sunset at 18.49, the Swifts became more excited and raced among the tree-tops, at roof-top height, on winnowing wings. Flight became faster, more erratic and the parties more compact. At 19.00 the two parties combined and I then estimated a total of 120 birds. Behaviour changed again; the Swifts flew rapidly up and down a straightish course of some 200 yards. A few minutes later, the Swifts had risen clear of the tree-tops and were flying more casually and slower. The dense flock appeared to rise vertically at a slow rate and disappeared in the growing gloom against a background of cloud at 19.12. The flock appeared merely to drift upwards, rather than a spiralling action. By this time the Swifts were several thousand feet up. Flight appeared to be leisurely with an occasional sudden brief dive. I could not see whether these were free falls although I was using Ross 9 x 35 binoculars.

Thus they disappeared from view, still climbing, nine minutes after commencing the ascent and 23 minutes after sunset. Swifts make clumsy landings in trees even in half light, (I have five observations relating to *Apus apus*), I doubt if they would successfully manage it in such gloom. The coastal cliffs between Mornington and Frankston might offer good roosting sites to birds such as swifts, which have been observed roosting vertically on walls, but no interest was shown in these sites. It seems likely that the Swifts spent the night on the wing, high over Frankston.

Another possibility could be that the Swifts were embarking on an overnight flight to new feeding grounds, but the Swifts gained no horizontal distance in their ascent. Migrating birds, of course, quite normally travel at night. However, Fork-tailed Swifts were still present over Frankston the following morning (March 11), whereas I observed none elsewhere that day during the return journey to the office, 20 miles north of the town. The Swifts were still present but that evening flew at rather higher altitudes, gliding lazily around. This was especially true of a few Spine-tailed Swifts. An attempt to again watch the behaviour of the Swifts at dusk failed because they disappeared during a gap in observations between 18.15 and 18.45. Due to complete cloud cover it was very much darker than the previous night. No Swifts could be seen the following day.

March 10 was a very hot day, the temperature in Melbourne

reaching 90°F. During the afternoon there was a light breeze and patches of cumulus cloud rolled in from the north giving 4/8 cover. The night was calm, clear and warm and the following day again very hot. The two preceding days had been fine although less warm, and March 9 was remarkable for the extremely calm conditions. The weather during this period was influenced mainly by a strong anticyclone situated over the Tasman, with moist unstable air in the upper atmosphere moving south-easterly from central Australia producing 8/8 cloud cover, local rain and thunderstorms by the evening of March 11. March 12 was cooler, the maximum temperature reaching only 78°F.

I do not find it in the least surprising that the aerial swift should choose to spend the hours of darkness in its element, free from the danger of predators. The behaviour described above is similar to dusk ascents of *Apus apus* which I have seen in England.

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A Note on the Display of *Haliaeetus leucogaster*, the White-breasted Sea-Eagle. Two adult pairs of White-breasted Sea-Eagles occupied territories over the entrance of Sandakan Harbour, Sabah (then Colony of North Borneo) during the late 1940's and early 1950's. The birds were regularly in evidence, ranging considerable distances along the north coast and over the harbour in search of their regular diet of sea-snakes and fish, and not disdaining to take their toll from the native tidal fish traps.

One pair nested annually at the top of an ancient dead tree rooted on the sloping cliff face below and clearly observable from the Residency garden, the other pair on the westward slope of precipitous Berhala Island, western guardian of the harbour entrance.

Early one clear sunny morning in mid-May 1951, the four birds, circling three to four hundred feet high above the Sandakan wharf, attracted attention by the continual loud "cackling". There was virtually no wind, at least at ground level, but the birds were soaring effortlessly. There were no overt acts of aggression although the birds often swung within a few yards of one another as they soared.

The two most widely separated birds, several hundred yards apart, suddenly swung inwards, set their wings at gliding angle and sailed directly towards each other, steadily losing height and gathering speed as they planed. A head-on collision appeared imminent. Both swiftly gliding birds were silent while the other two kept up the vociferous cackling as they circled.