

roof of the school. The children were very interested to see the little birds fly down on the floor of the shed to pick up a straw or a feather they had dropped.

Another Finch, slightly larger than but resembling very much the coastal "Bullfinch," was often seen, but I was unable to classify this pretty black-throated Finch.

Corone australis. Australian Raven.—Four or five of these birds were seen on one occasion.

Cracticus nigrogularis. Black-throated Butcher-Bird.—Seen daily.

Gymnorhina tibicen. Black-backed Magpie.—Seen daily.

In addition to those mentioned above, a Whistler, Honey-eater, Flycatcher, and a Wren-Warbler were also seen, but I was unable to determine exactly to which species they belonged.

Migration of Swifts.

BY H. STUART DOVE, F.Z.S., WEST DEVONPORT, TASMANIA.

THE first Spine-tailed Swift (*Chaetura caudacuta*) seen in North-West Tasmania this summer was a solitary specimen travelling at a great rate towards the sea, or in a northerly direction, on 12th January. A couple were noticed on 19th February circling towards the beach at noon; wind fresh from N.W., weather fine. On 20th same month a large number was seen by Mr. L. A. Thurston (a resident of Devonport, and one of our members, R.A.O.U.) passing over from S.E. towards N.W.; wind was north-west, moderate, weather fine after rain from S.E. on 18th. On 22nd February the same observer noticed a small party coming from N.W. in the afternoon; wind was light from that quarter. On 4th March, after a few hours' rain from eastward, a pair of Swifts was noticed coming from the north-west; wind E.S.E., light. Towards evening a number appeared, at heights of 40 feet to 200 feet or so, circling and feeding. The afternoon was muggy, with light showers.

At about 10.30 a.m. on 5th March hundreds of Spinetails appeared over Devonport until noon, circling before a violent south-easter, and disappearing towards the north-west. The air seemed thick with them at from 30 feet to a great altitude, circling and playing, but apparently not feeding. A loose cluster of the birds, like a magnified Pleiades, could be seen circling and preserving much the same formation until it disappeared away over the coast-line to north-west. This is the first *large* company of Spinetails observed for two years.

6th March.—A large number again appeared in the morning, between 10 and 11 o'clock, making towards south-east. They were back again at sundown, when a very peculiar effect was observed. A very large cloud covered most of the western sky, turned a beautiful golden tint by the rays of the setting sun, and as the birds flew straight towards this the white throat and forehead of each became tinged until it resembled old ivory. As the

company passed in a long trailing line, mostly by ones and twos, it was very striking to watch this transformation take place as soon as each bird was in the right position for the eye to catch it.

A friend (Mr. W. G. Buck), when out driving on 14th March, saw a number of Spinetails about 5 p.m. flying just over the tops of a grove of gum saplings, back and forth, as if hawking insects; this was about a mile inland, on a calm, sunny evening. On 22nd March a single Swift was noticed from the Forth Hill, about 6 miles west of this, making north-west or seawards at 5.30 p.m.; moderate breeze from S.W.

Early in afternoon of 30th, being close and showery from the N.W., a small party of the birds appeared over the garden, flying low (20 feet or so) and feeding. Shortly after a great company appeared from S. and S.E. The air appeared thick with them, from low up to 300 feet or so, dashing in all directions. One party formed a loose cluster, as on 5th, and circled as if in play while working towards north-west. This habit of forming a kind of Pleiades and working along in that fashion, which has been noted also in former years, seems peculiar to the Spinetails when on migration; I have never seen it with any other species. Although the wind freshened up from the direction towards which the birds were making, it did not seem to affect them in the least; their wing-power is so strong that it is apparently just as easy to go against as with a good breeze. A *Graucalus*, or "Summer-Bird," which was endeavouring to make in the same direction was blown hopelessly to leeward.

The morning of 5th April was thundery, with rain; afternoon, clearing, with fresh N.W. breeze. Swifts were seen from 4.30 until 5 p.m. in small straggling lots, coming from E. and S.E., and making directly north-west, not feeding. The following afternoon, at 4 o'clock, a large number passed in similar straggling fashion, and heading, as yesterday, against a fresh breeze; day was fine, with drifting clouds, wind squally. These were the last Spinetails observed.

Under the heading of "The Elusive Swift," some instructive notes were contributed to an April *Sydney Mail* by W. M. S. The writer says that "along the New South Wales coast north of Manly, and especially about Dee Why and Narrabeen, the Swifts had been noted every day for eight months without intermission. Always they are on the wing. These birds are supposed to land occasionally somewhere, but the writer has never yet met an observer who had seen a Swift anywhere but on the wing. Most authorities are agreed that the Swift is the fastest flier in existence; according to Gould, it can cross Bass Strait in an hour. When in full flight, with all its matchless powers exerted, one of these birds will pass over the head of an observer with something of the effect of a rifle bullet. One hears a whistling sort of sigh, has a dazzling impression of what looks like a brown streak of light, and the bird is vanishing a quarter of a mile away before the observer has time to turn round to try and follow the flight.

This species will fly easily at the head of a wind-storm having a velocity of 50 miles per hour; in fact, it appears to revel in storms! It will fly with the wind for a time, then turn and fly against it, without diminishing speed, and after criss-crossing in a kind of gambol with the elements will go straight ahead again to overtake the storm. When it is recollected that this Swift commonly travels up to 200 miles an hour—Sydney to Melbourne is but a two-hour or so journey for it—it will be realized that it has no trouble in giving a start to the fastest wind-storm and getting ahead whenever it chooses. Along the coast, as the night gathers in, so their speed increases, until by the time it is dark they are travelling in a veritable frenzy of energy, as if conscious of being pursued by some evil demon of the air, and intent on outstripping it. As the darkness closes in over the area through which they rush, they are still flying as if they had no intention of ever landing. According to Dr. Leach, the Spine-tailed Swift has never been recorded as alighting in Victoria, but the spines at the end of the short tail feathers are believed to assist the bird in clinging to the face of a cliff." Most of these remarks by W. M. S. I can endorse from personal observation in Tasmania, where I have seen many thousands of Spinetails, but never anywhere except on the wing. Their enjoyment of storms, too, quite coincides with opinions expressed by me for many years past in *The Emu* and other journals—that their appearance on our coast is almost invariably accompanied by atmospheric disturbance. It is extremely probable that this species flies all night—when migrating, at all events—as I have seen them passing overhead until it became too dark to distinguish objects any longer. But the "frenzy of energy" possessing them just as darkness closed in has escaped me—the birds seemed to continue at their usual easy but incredibly rapid pace as long as they could be seen. It is evident that vast numbers of the Spinetails never visit our island at all, otherwise they could not be seen for eight months in succession on the coast of New South Wales, so that the total quantity migrating each season from the northern hemisphere must be enormous.

Other Migrants.—The Welcome Swallows (*Hirundo neoxena*), Tree-Swallows (*Petrochelidon nigricans*), and a great many Wood-Swallows (*Artamus sordidus*) appeared to leave with the disturbance at the end of March, as well as most of the Summer-Birds (*Graucalus parvirostris*). A good many Pipits (*Anthus australis*) were noticed up to the third week of present month (April), and some Wood-Swallows, which appeared to have delayed inland long after the majority had gone, were observed during Easter passing with their easy sailing flight out to sea, at a considerable altitude, the last noticed being on 21st (Easter Monday). The season is exceptionally fine, dry, and warm.