fasciinucha. Vincent does not mention any chestnut coloration on the nape in the Mlanje specimen, one of the characteristics of *F. fasciinucha*, presumably because this is also present to some degree in almost all the specimens of *F. cuvieri*. I cannot see any difference in the coloration of the scapulars in the two species, as might be inferred to exist from Vincent's remarks.

The following are measurements in millimetres of the foregoing specimens:—

		wing	tail
F. fasciinucha			
	2♂	205, 207	88, 90
	2♀	228, 232	102, 107
F. cuvieri			
	17♂	209–245 (219·4)	107–124 (117·0)
	7♀	220–253 (240·7)	109–131 (121·9)
	9 unsexed	211–236 (225·3)	107–119 (114·2)

Some of the specimens of *F. cuvieri* may well have been mis-sexed, though the averages show females as larger than males. They are from West Africa (Nigeria to Sierra Leone and the Gambia), and the Sudan and Abyssinia south to northern Tanganyika Territory, while there is also one from Angola. The specimens of *F. fasciinucha* have rather stouter bills than those of *F. cuvieri*.

For other records of *F. fasciinucha* from Rhodesia and Nyasaland, see Smithers (' Ibis ' 1956 : 139), and Benson & Smithers (' Ostrich ' 1958 : 57).

14 April 1959. C. W. BENSON.

THE SNOW PETREL PAGODROMA NIVEA NESTING IN DRONNING MAUD LAND

An expedition sent by the Norsk Polarinstitutt to Dronning Maud Land in Antarctica in 1956 reported that they had found birds breeding in the mountains about 300 km. from the sea.

On 1 November 1958 the Institut sent another expedition to the same area and among the members was the geologist T. S. Winsnes. He has a fair knowledge of birds and therefore I asked him to take notes of everything of interest which he might find in the mountains to the south and east of " Norway Station ", the headquarters of the expedition which has now been there for more than two years.

Mr. Winsnes related that he saw the Snow Petrel almost everywhere in the area on the map, flying over the ice-fields between the mountain-ranges and the sea. On the mountains he found them breeding in the area 70° 30′ to 71° 55′ S., 9° to 11° 45′ E. They were nesting on the northern slopes of the mountains from 1500 m. above sea level, where the mountain met the glacier, up to 2000 m. Here they were well protected because the wind came from the east and the southeast.

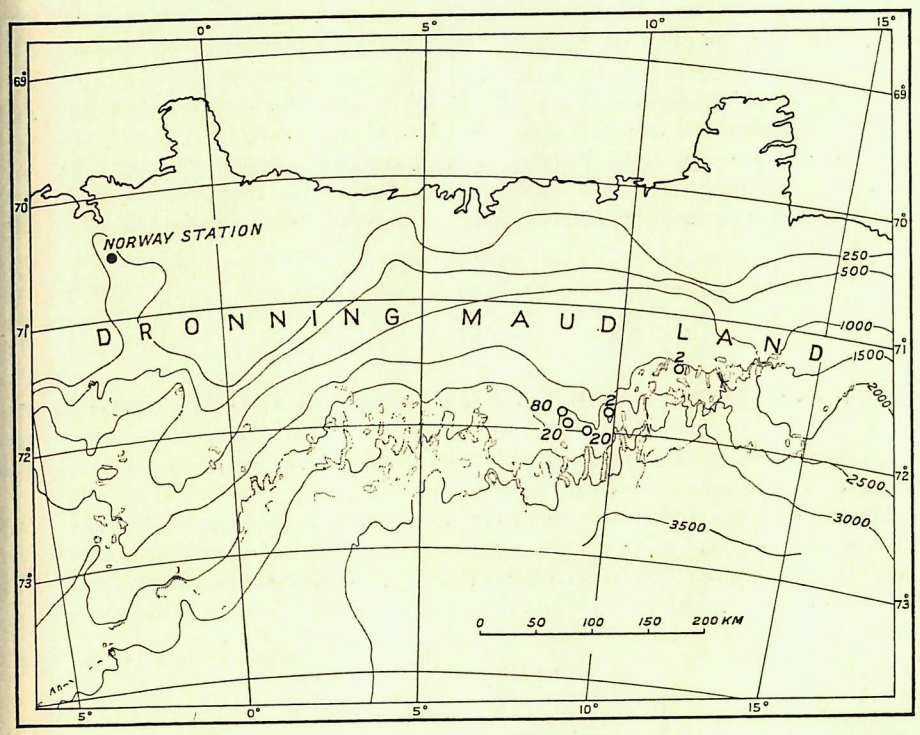
The nests were placed among stones, mainly in hollows where the breeding bird sat from 10 to 50 cm. from the opening. No nesting material was found except some sparse down from the bird itself. There was no sign of a scrape.

The egg was pushed forward under the bird and could easily be detected as a bulge under the feathers of the breast. Seemingly the egg did not rest on the ground, but was situated between the body and the long breast-feathers, resting on these. The incubating birds were very tame and did not leave the nest even when they were lifted up with the handle of an ice-axe to see if they had an egg or a chick. Around the nests

in clefts among the stones, a great number of old eggs and more or less mummified young, in different stages of development, were lying.

When approached the bird would eject a spray of oil of the colour of tomato-juice, usually to a distance of about 75 cm., but exceptionally to 1 m. from the nest. The bird could make three ejections before it was empty. The oil had no offensive odour, and it covered the stones outside the opening where it had clotted to a substance so hard that a hammer had to be used to get it asunder. Generally there were about two pounds of the substance in front of the nests, but lumps that weighed up to 20 pounds were found. Embedded in this waxlike substance, some mummified chicks were found. From the roof of the hollows the oil had dripped down and had clotted in the form of stalactites at the entrance. The recent parts of the wax were of a buff colour, but the older parts were stone-grey and very hard.

Breeeding stations of the Snow Petrel in Dronning Maud Land.



The sitting bird became excited when approached and began to call with a note like that of an attacking Arctic Tern, " teck-teck-teck . . . ". From the screes where the birds nested undisturbed, another note was heard and the call was something between the croaking of a Fulmar and the screeching of a Kittiwake when disturbed in a colony (not the kittiwake-call).

On 8 January 1959, at 71° 55′ S., 9° E., 50 nests were found. On some of them the birds were sitting on single eggs, the rest of the nests being empty. No chicks were seen. In this place two pairs of skuas *Stercorarius antarcticus* were seen. The species was probably breeding here, though no nest was found. On the 10th, fourteen *Pagodroma* nests were examined. Of these there were three empty ones, one held a newly hatched chick and ten contained one egg. Between 30 and 50 nests were occupied and twice as many were not in use. Here an old egg and a mummified chick were obtained, as well

as samples of the waxlike substance, a sample of oil and a fresh egg. One *Oceanites oceanicus* was seen.

On the 11th Mr. Winsnes went 6 km. farther south and found ten occupied nests. In all the localities where *Pagodroma* was nesting he found *S. antarcticus*. When the sledge-parties rested, the Skuas came visiting them. On the 12th, 21 km. to the east, he found several nests of *Pagodroma* and on the 13th another nesting area. Here there was also a nest of *Stercorarius antarcticus* with a dead, newly hatched chick. Around the nest of the Skua there were great numbers of remains of young petrels, but none of adults. On the 20th, at 71° 30′ S., 11° 45′ E., there was a single nest of *Pagodroma* and one pair of skuas was seen.

The glaciologist Mr. Lunde has also returned to Norway after two years at " Norway Station " and he has given me some supplementary notes. On 12 February 1958, at 72° S., 4° 20′ E., 20 nests of *Pagodroma*, nine eggs with dead embryos and a few living young were found. Great numbers of dead chicks were lying about. A few Skuas were seen in the vicinity of the nesting ground. On the 15th, about 15 km. farther southeast, ten nests were found. Here there was one egg, two living young and several dead ones.

On 30 November 1958, at 71° 57′ S., 2° 50′ E., great numbers of *Pagodroma* were seen, but only one nest, with one egg. On 1 December, and not very far from the above place, there were many Snow Petrels, but only one seemed to be nesting. In all the places where *Pagodroma* nested, the Skuas circled above the areas, but the nests of the Petrels were always placed in places where it was difficult for the Skuas to get at them.

12 March 1959. H. L. LØVENSKIOLD.

SUBSPECIFIC VARIATION IN BIRDS' SONGS AND CALL-NOTES

Nothing further seems to have appeared in the ' Ibis ' on this subject since the observations of Benson (' Ibis ' 1948: 48–71).

Many non-migratory species are common to Burma and Borneo, but are usually represented by different subspecies in each; below I have listed twenty such species with whose calls I am familiar in both countries. The calls are described in my books " The Birds of Burma " (Edinburgh 1953) and " The Birds of Borneo " (in press).

English name	Specific name	Subspecific name Burma/Borneo	Remarks on usual call-notes
Mountain Imperial Pigeon	*Ducula badia*	*griseicapilla/badia*	Identical
Little Cuckoo-Dove	*Macropygia ruficeps*	*assimilis/nana*	Identical
Spotted-necked Dove	*Streptopelia chinensis*	*tigrina/tigrina*	Broadly similar, but differ in details
Large Hawk-Cuckoo	*Cuculus sparverioides*	*sparverioides/bocki*	Identical
Indian Cuckoo	*Cuculus micropterus*	*micropterus/concretus*	In India and Burma definite drop in pitch on second and fourth notes, in Borneo on fourth note only
Blyth's Cuckoo	*Cuculus saturatus*	*saturatus*/subsp.	In Burma 4 notes In Borneo 3 notes
Plaintive Cuckoo	*Cacomantis merulinus*	*passerinus/threnodes*	Broadly similar, but differ in details
Drongo-Cuckoo	*Surniculus lugubris*	*dicruroides/barussarum*	Identical
Common Coucal	*Centropus sinensis*	*intermedius/bubutus*	In Borneo call down and up the scale is seldom heard, usual call being 4 notes on same pitch