than average amounts of copper (70 p.p.m.), boron (700 p.p.m), and lead (50 p.p.m.); average amounts of these three elements in soils are, respectively, 20, 10 and 10 p.p.m.[3]. The large amounts of copper and lead in my sample may be significant in the occurrence of the *Mielichhoferia*. Growing beside the copper moss was a liverwort species also known[1] to be associated with heavy metals, *Gymnocolea inflata* (Huds.) Dum. In 1964, I collected another copper moss[4], *M. macrocarpa* (Drumm.) Jaeg. and Sauerb., only a few kilometres from the site where I found *M. elongata* in 1967, and strongly suspect that both copper mosses are associated with the same deposit, although the rock on which *M. macrocarpa* grew was not analysed for heavy metals. The analyses on the upper 14 mm of the *M. elongata* polster (lab. No. D412933) indicate that the moss is concentrating several metallic elements including barium, lanthanum, lead, nickel, strontium and zinc.

All three North American species of copper mosses are now known from northern Ellesmere Island. The third species, *M. mielichhoferi* (Hook.) Loeske, has been reported from the Alert area[5]. Their presence could be an important indication of deposits of heavy metals on northern Ellesmere Island. The Ellesmere Island occurrences of *M. elongata* and *M. mielichhoferi* are highly disjunct, and probably relict. *M. macrocarpa* is an arctic-montane species known only from North America, with most of its known localities on Ellesmere Island. These distributions, and the fact that the plants are uniformly sterile in almost all localities, provide further biological evidence favouring a Wisconsin glacial refugium on northern Ellesmere Island[6].

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GUY R. BRASSARD

Department of Biology,
University of Ottawa.

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Evidence for a Southern Breeding Population of True's Beaked Whale

TRUE'S beaked whale (*Mesoplodon mirus* True) has hitherto been recorded from fourteen specimens stranded between the Outer Hebrides and Florida, and has been considered a North Atlantic species[1]. Talbot[2] reported the stranding of an adult male True's whale at Wilderness, South Africa, in 1959. He suggested that this extension of range could indicate a southern variety of the species, though Moore[1] regards this specimen as a stray.

On January 6, 1969, two beaked whales were stranded at Maitland River Mouth, 20 miles westward along the coast from Port Elizabeth. The skulls and mandibles were collected by the Port Elizabeth Museum. After preparation, they were identified as True's beaked whales. Both were females; the larger animal (15 feet 11 inches; 4,780 mm) was lactating and was considered to be the mother of the smaller calf (11 feet 2 inches; 3,350 mm). The mother also carried a 105 mm foetus in the right horn of the uterus.

The discovery of a pregnant mother and calf is stronger evidence for a southern breeding population than Talbot's single male specimen. While it is not impossible for them to have strayed from the northern hemisphere, the small size of the foetus suggests that mating occurred recently. This would indicate the presence of at least one male in the southern hemisphere, and a definite, though possibly small, breeding population.

Both Sub-Antarctic, South Atlantic and Indian Ocean species appear in Eastern Cape waters where there is a mixing of waters of different temperatures.

The distribution of True's beaked whales in the North Atlantic is predominantly western and appears to be localized in the relatively warm waters of the Gulf Stream. If a southern population exists, a similar pattern of distribution could be expected and, by analogy, it is more likely that the South African specimens originate from the warmer waters of the southern Indian Ocean off the south-east coast of South Africa, rather than the much colder waters of the South Atlantic, or Sub-Antarctic.

Speculation on distribution based on so few specimens is difficult, but it is interesting that the two strandings occurred within 200 miles of each other and nowhere else in the Southern Hemisphere, suggesting localization.

G. J. B. Ross

Port Elizabeth Museum,
Port Elizabeth,
South Africa.

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Background Selections of the Pale and Melanic Forms of the Cryptic Moth, *Phigalia titea* (Cramer)

KETTLEWELL[1] demonstrated that the pale (*typical*) and melanic (*carbonaria*) forms of the peppered moth, *Biston betularia* L., tend to rest on white and black backgrounds respectively, when presented with a choice between the two. I wish to summarize results obtained in a similar experiment, using typical and melanic individuals of the North American geometrid, *Phigalia titea*.

The melanic form of *P. titea* is *deplorans*, and is quite similar to the *monacharia* form of the European *P. pedaria*. This black form is generally regarded as an industrial melanic, having first appeared in New Jersey in 1915, and markedly increased in frequency around industrial centres of the north-eastern United States since 1940 (ref 2).

My experiment was conducted during the spring of 1968 in Leverett, Massachusetts. Each night, from March 28 to April 22, all the *P. titea* that were attracted to two 150 W Westinghouse outdoor spotlights were collected and placed in an experimental apparatus, consisting of two black and two white pieces of painted blotting paper, each 27·9 × 48·3 cm, formed into a cylinder of alternating black and white sections. (The percentage-reflectance values of the black and white backgrounds were 4·30 per cent and 85·61 per cent respectively, as determined with a General Electric recording spectrophotometer, using pressed $BaSO_4$ as the white standard.) The cylinder was set in a plywood box, 35·6 cm square and 48·3 cm high, which was covered with a pane of window glass. The apparatus was placed in a wooded area, and each morning, just after dawn, the background selections of the moths that had been collected the previous evening were noted.

The results of this experiment are given in Table 1. Both the typical and melanic *P. titea* exhibited significant