

Short communications

THE LANTERNFISH *NOTOSCOPELUS KROEYERI* (MALM) CAUGHT IN ANDFJORDEN; NORTH NORWAY.

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On 25 September 1978 11 specimens of the myctophid fish *Notoscopelus kroeyeri* (Malm) were taken by R/V «Johan Ruud» during bottom trawling in Andfjorden, North Norway, 69°08'N, 16°12'E. The trawl depth was 370 m, and the catch was dominated by blue whiting *Micromesistius poutassou* (Risso) and Norway pout *Trisopterus esmarkii* (Nilsson). *N. kroeyeri* has previously been caught in this locality (J.-E. Eliassen, pers. comm). Andfjorden is well north of the main distributional range of this species which generally occurs in the temperate North Atlantic to the north and west of the British Isles and in the North Sea (Nafpaktitis 1975, Gjørseter 1978). Previous records to the north of 65°N are limited to a few stray specimens (cf. Gjørseter 1972). Furthermore *N. kroeyeri* is an oceanic mesopelagic form which has only occasionally been found in Norwegian coastal waters. Gjørseter (1972) and Pethon (1979) report findings of isolated specimens only.

The length of the specimens (measured to the base of the caudal fin) was 103–112 mm with a mean length of 109 mm. The specimen of 103 mm was a male. It had a distinct luminous gland on the dorsal side of the caudal peduncle which is a secondary sexual character. The other specimens all were females. One of these (110 mm) had ovaries containing eggs (diameter 110–210 µm) undergoing vitellogenesis. The others had ovaries containing only resting oocytes (diameter 60–100 µm). None of the gonads contained residual eggs which would have indicated previous spawning. In the North Sea and off the Scottish and Irish coasts the gonads of *N. kroeyeri* do not reach full maturity and spawning has not been reported as occurring in these waters (Gjørseter 1978). The population seems to be maintained by fish drifting from more southern waters. Incomplete gonadal development in specimens collected further north is therefore not unexpected, but it is not known from where young specimens are recruited (Gjørseter 1978).

One specimen (the male) had an empty stomach but the other specimens had eaten planktonic crustaceans. The stomach of five specimens was full, but not extended. The hyperiid amphipod *Themisto abyssorum* (Boeck) was the food item occurring most frequently, being the only food eaten by four fish and being present in the stomach content of all others. Other identified prey were euphausiids (*Thysanoessa* sp., 4 cases), calanoid copepods (4 cases), ostracods (*Conchoecia* sp., 1 case) and a decapod larva (1 case). The trawl catch was taken during the afternoon. Gjørseter (1978) found that *N. kroeyeri* feeds at any time during the day but most intensively at night. In his material euphausiids and copepods were the most frequent food items.

Andfjorden has a maximum depth of 512 m and a rather open connexion with the sea. There is a sill at a depth of 240 m but this should not hinder the entrance of mesopelagic forms to the fjord. The number of *N. kroeyeri* caught is remarkable considering the distance from the main area of distribution, and it is possible that once isolated specimens have entered the fjord they are trapped within the deeper basin.

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