Proc. Hampsh. Field Club Archaeol. Soc. **41**, 1985, 269–287

NOTES

THE INTINERANT SEA-SPIDER *Ammothea hilgendorfi* (BOHM) IN BRITISH WATERS

As a consequence of the international shipping trade to the major ports of Southampton and Portsmouth, this area of the Solent now supports many immigrant species of marine invertebrates (see Thorp 1980), including a recently increasing component of Japanese forms (*eg* the sea-squirt *Styela clava* Herdman, and the serpulid tube-worm *Pileolaria (Pileolaria) rosepigmentata* (Uchida)). During 1978, regular samples of mixed macrophytic algae from Southampton Water were searched for pycnogonids, or sea-spiders, an infrequently studied and exclusively marine group of small arthropods, the British species of which have been reviewed by King (1974). Two immature specimens of *Ammothea hilgendorfi* (Bohm 1879) were found in separate samples taken on 17 and 24 August 1978 inside Calshot Spit. These constitute the first British records, and indeed the first Atlantic records for this species. While the natural distribution of this species is both sides of the tropical and north temperate Pacific Ocean, notably Japanese waters, it has recently been discovered in the Lagoon of Venice by Krapp and Sconfietti (1983), who give clear figures and a complete annotated reference list for the species. They hypothesize its introduction into the northern Adriatic by immigration on the hulls of ships through the Suez Canal and the Mediterranean. The British specimens are presumed to have arrived in a similar manner, probably direct from Japanese waters. An alternative possibility is indirect transmission via transplanted Japanese oysters (*Crassostrea gigas* (Thunberg)), which are known to be the source of introduction of sessile epifaunal species in French waters in the 1970s (Gruet *et al* 1976). One of these species, the tube-worm *Hydroides ezoensis* Okuda, is now abundant in Southampton Water (C H Thorp, pers com), having apparently crossed from France without the oyster. *Ammothea hilgendorfi*, though

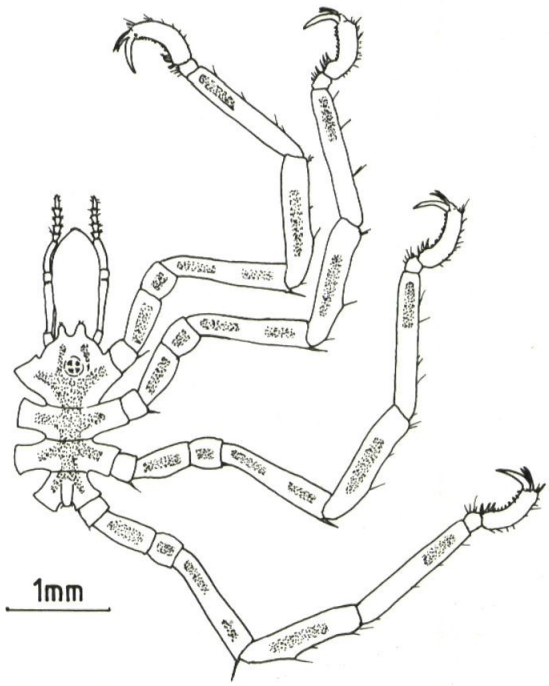

Fig 1. Dorsal view of *Ammothea hilgendorfi* (legs on the left side not shown). Stippling denotes brown pigmentation.

not recorded by Gruet *et al* (1976), may have followed a similar course. *C gigas* has been introduced to the fishery grounds in Stanswood Bay, at the mouth of Southampton Water, but only as pre-cleansed British hatchery derived stock. Fry and Hedgpeth (1969) point out that 'such small, sluggish animals (pycnogonids) can be carried many miles in weed or hydroids attached to ships', and such artificial migration has been recorded in other genera (*eg* Bamber 1979); the Antipodean *Ammothea magniceps* Thomson is also suspected of being a ship's bottom migrant (W Fry, pers com).

A hilgendorfi (Fig 1) is distinguishable from other Ammotheids recorded from British

inshore waters by its complete trunk segmentation with well separated lateral processes, dorsal posterior ridges on the three anterior trunk somites (characteristic of the genus), and the great reduction of the chelifores: even in the younger Southampton Water specimen, whose ovigers are mere buds, the chelifores are reduced to rounded processes with a distal spine and no apparent articulation. Live specimens have a characteristic brown pigmentation associated with the gut, distinct on the trunk and giving a banded appearance to the legs. It remains to be seen whether this species establishes itself in British waters, as it seems to have done in Venice.

REFERENCES

Bamber, R N 1979 A new species of *Endeis* (Pycnogonida) from West Africa *Zoological Journal of the Linnean Society* **65** 251–254.

Fry, W G and Hedgpeth, J W 1969 Pycnogonida 1 Colossendeidae, Pycnogonidae, Endeidae, Ammotheidae. Fauna of the Ross Sea, 7. *Memoirs of the New Zealand Oceanographic Institute* **49** 1–139.

Gruet Y, Heral M and Robert J–M 1976 Premieres observations sur l'introduction de la faune associee au Naissain d'huitres japonaises *Crassostrea gigas* (Thunberg), importe sur la cote Atlantique Francaise *Cahiers de Biologie Marine* **17** 173–184.

King, P E 1974 British Sea Spiders *The Linnean Society of London Synopses of the British Fauna* (New Series) 5, Academic Press, London.

Krapp, F and Sconfietti, R 1983 *Ammothea hilgendorfi* (Bohm 1879), an adventitious pycnogonid new for the Mediterranean Sea *Marine Ecology* 4 123–132.

Thorp, C H 1980 The benthos of the Solent, in *The Solent Estuarine System: An Assessment of Present Knowledge* (Natural Environment Research Council Publications, Series C) **22** 76–85.

Author: R N Bamber, Marine Biology Unit, CEGB, Fawley, Southampton SO4 1TW.

A BOUT COUPÉ HANDAXE FROM HAMPSHIRE

The implement described below was found by Mr G Jones in 1984. It was recovered from the surface of a recently harrowed field on the south side of Gutteridge's Wood (SU 56755820) and was an isolated find. The implement appears to belong to the '*bout coupé*' class of handaxes which has been described in detail by Roe (1981, 250–67). As such handaxes are relatively rare in Britain, the recovery of this new example seemed worthy of a brief note. The writer is grateful to Mr Jones for permission to publish this note, and to David Allen of the Hampshire Museum Service for all the help he has given.

The handaxe is of classic *bout coupé* shape with a rounded tip and the characteristic angles formed by the meeting of the sides and butt (in the plan view). It measures 119 × 84 × 26mm as drawn, and weighs 225g. In profile (Fig 2b) it is flat and slightly plano-convex. It was probably made from a large flake struck from a flint nodule, though no trace of the original flake surface remains, since it has been carefully worked on both faces with elegant flat flake removals. There is a small patch of cortex on the less flat face (Fig 2c). The implement has an orange stain on both faces, and a mottled white patina developing on one face (Fig 2a). There has been some slight modern damage to the edge of the piece.

Bout coupé handaxes are known to occur in Britain in association with Mousterian arti-