

Fig. 1. Metamorphosis of *Neomenia carinata* (camera lucida drawings of live larvæ). A, Trochophore at 3 days; B, trochophore at 9 days, ventral aspect; C, trochophore at 10 days, right lateral aspect; D, trochophore at 11 days, right lateral aspect; E, newly metamorphosed stage (12 days), right lateral aspect; F, the same, ventral aspect. In E and F the spicules are not illustrated. The arrow shows the antero-posterior axis of the animals.

results so far obtained plainly show the need for a re-investigation of the development of *Nematomenia*. At present, the indications are that the nearest relatives of the Aplacophora within the Mollusca may be found in the primitive Lamellibranchia rather than in the Polyplacophora. The resemblances in development between the solenogastres and members of the Brachiopoda, Archiannelida and Nemertea (to which various authors have directed attention) are probably without profound significance. The work on *Neomenia* is being continued and is financed by a grant from the Leverhulme Trust.

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Dagger Nematodes associated with a Clover Sickness

DAGGER nematodes (*Xiphinema* spp.) are now recognized as important crop pests in many North American states¹⁻³ and occur widely in tropical countries^{4,5} in close association with plant roots. Because of their migratory ectoparasitic habit they are seldom observed feeding on the host plant, and where they appear to be associated with crop damage pathogenicity is difficult to prove.

Examination in early February of 'sickly' white clover (*Trifolium repens* L.) plants from a clover ley near Crewkerne, Somerset, showed no pathogenic organism, but large numbers of dagger nematodes were recovered from the soil around the roots. The roots themselves bore minute lesions compatible with nematode feeding, and many young rootlets

were brown and shrivelled at the tip. The field, a sandy loam, had been sown to grass and clover leys in seven out of the past ten years and had a similar early history.

The area was again sampled at the end of April, by which time the clover was dying off in patches. Many dagger nematodes were again recovered, but fungal damage was also evident and small sclerotia, believed to be those of *Sclerotinia trifoliorum* Erikss., were seen; the stem eelworm *Ditylenchus dipsaci* Kühn also occurred in numbers sufficient to constitute a possible cause of disease.

The exact role of dagger nematodes in this complex is thus uncertain; this is the first record of the genus *Xiphinema* in Great Britain, and observations and measurements suggest that the specimens recovered represent a new species, which will be described elsewhere.

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³ Schindler, A. F., *Nematologica*, **2**, 25 (1957).

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Pollen of *Acacia* from Tufaceous Limestone near Udaipur

I HAVE undertaken the investigation of fossil microflora from a tufaceous limestone near Udaipur. This fossiliferous locality is about three-quarters of a mile north-west of the tenth milestone on the Udaipur-Gogunda Road. It was first described by Murty¹, who had suggested a tertiary age to these beds.

A few pieces of fossil were macerated with Schultz's solution and clear dehydrated mounts were prepared by passing the material through various grades of alcohol and mounting in Canada balsam. Some of the preparations were stained with safranin. The

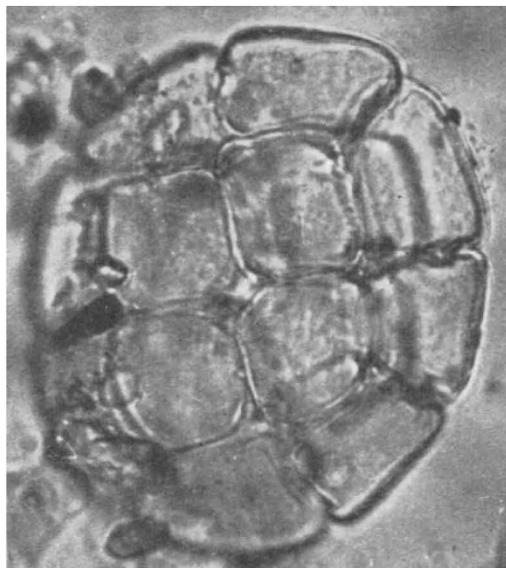


Fig. 1. Fossil *Acacia* pollen grain. ($\times 845$)