

comprised 19% and *H. ovalis* 5%.

A characteristic of the group as a whole is that its members fed low in the food chain, most of the prey being detritivores and suspension feeders. With the exception of the Cape stumpnose, *Rhabdosargus holubi*, they are all found only in shallow water (usually < 10 m) close inshore (Fischer & Bianchi 1984; van der Elst, pers. comm.). The spotted grunter, *Pomadasys commersonni*, was the fish most dependent on sand mussels for its food and it is well adapted to feeding on them with its crushing pharyngeal teeth and habit of 'blowing' water on sand containing mussels to expose them (Smith 1965). The commonly caught Natal stumpnose, *R. sarba*, and African pompano, *Trachinotus africanus*, proved less restricted in their diet as they move onto reefs to feed on *P. perna* as well. The largespot pompano, *T. botla*, feeds largely on hippids for which it enters the shallow surf and swash zone.

The other group of fish were less frequently caught from the shore or were landed with minimal stomach contents, and often comprised more active predatory species (Table 3). Their diet was less varied and they preyed mainly upon the crustacea listed above. They were more dependent on prawns (49%) than the previous group and less dependent on crabs (28%) and hippids (9%). Small fish, usually unrecognizable, were also an important component of their diet.

Opportunism is the most remarkable characteristic of feeding in the fishes studied. This is demonstrated by the diversity of food organisms listed, particularly in Table 1, and the fact that specimens were occasionally gorged with items abundant for short intervals such as megalopa larvae and the pteropod, *Cavolina longirostris*. The small amount of algae consumed by a few species appeared to be incidental and all of the fishes examined can be classed as omnivorous predators. Various organisms emerge as the major food items of fish feeding on the Natal nearshore sand substratum and the results will provide corroborative evidence of the relative abundance of these organisms as well as an insight into the role of the teleosts feeding in this environment.

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Ophichthid eels in the coelom of several Natal offshore reef fish

P.A. Garratt

Oceanographic Research Institute, P.O. Box 10712, Marine Parade, Durban, 4056 Republic of South Africa

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Mummified ophichthid eels are reported from the coeloms of several Natal continental shelf reef fish species. Originally mistaken to be parasitic, these eels are in fact free-living and are eaten by fish. Once ingested, they bore their way out of the stomach, using their pointed tails and become encapsulated in connective tissue within the coelomic cavity.

Mummifiseerde palings van die subfamilie Ophichthini word beskryf uit die selome van 'n verskeidenheid Natalse vastelandsplat-rifvisse. Oorspronklik foutief beskou as parasiete, is hierdie palings in werklikheid vrylewend en word deur visse geëet. Nadat hulle ingesluk is boor hulle deur die maagwand van die vis met behulp van hul gepunte sterte en word dan in die bindweefsel van die buikholte ingekapsel.

The subtropical waters of Natal (South Africa) contain a wide variety of reef fish. Thirty-two species are commonly caught by offshore line-fishermen, with members of the families Sparidae, Serranidae and Sciaenidae making up the bulk of commercial and sport catches.

Biological research on dominant reef species has been in progress since 1979. During this time ophichthid eels have been found in the coeloms of 13 reef fishes: 11 sparids, namely three slinger *Chrysoblephus puniceus* (Gilchrist & Thompson, 1917), three santer *Cheimerius nufar* (Ehrenberg, 1830), two Englishman *Chrysoblephus anglicus* (Gilchrist & Thompson, 1908), and three Dane *Porcostoma dentata* (Gilchrist & Thompson, 1908) and the serranid, halfmoon rockcod *Epi-*

nepheus rivulatus (Valenciennes, 1830). The occurrence of the eel is not common, as over 9000 fish have been dissected during the study period.

Fish containing eels were caught along the length of the Natal coast in depths of 45–80 m. The eels occurred intermittently in the samples, except during August 1982, when three fish containing eels (two sparids and one serranid) were caught within a few days of each other in the Port Durnford area.

The eels were either *Callechelys* or *Caecula* spp., as they appeared to lack pectoral fins (Heemstra, pers. comm.). Each eel occurred singly, was 'mummified' and was suspended within membranes of connective tissue within the coelomic cavity. None were ever found in the stomachs or intestines of any fish examined. The eels were all loosely coiled, hard and odourless and ranged in length between 170–220 mm. They were a uniform brown with no distinctive colour patterns.

Ophichthid eels, subfamily Ophichthini, known as snake eels, are long and slender and have pointed tails, without a fin at the end. They occur in tropical and subtropical waters from the shoreline to depths exceeding 750 m. Many species are benthic and at times may burrow partially or totally into mud and sand, using their pointed tails (Smith 1965; Fischer & Bianchi 1984).

There have been few reports of ophichthid eels in the viscera of fishes. Goode & Bean (1895) first suggested that the eel was a 'parasitic boring form', but at that time little was known about these eels and nothing was known of the significance and use of their pointed tails. Later Suvorov (1948) cited by Walters (1955), stated that snake eels sometimes parasitize the angler *Lophius piscatorius*. Deraniyagala (1932), Breder & Nigrelli (1934) and Breder (1953) have suggested that the situation is probably the reverse, the eels attempting to bore their way out rather than in. Walters (1955 p. 147) supports this hypothesis, suggesting that '... the engulfed eel, in its struggles to escape, plunges its sharp tail through the gut wall of the fish and wriggles back through the opening, dying in the coelom soon thereafter'. Smith (1965, p. 388) also supports this idea stating: 'When swallowed alive by other fishes they often pierce the intestines and later become mummified in the belly cavity'.

As ophichthid eels are not parasitic but free-living forms, it would appear that the predators listed in this paper occasionally include them in their diets. When encountered, the eels are obviously swallowed whole. They then manage to bore their way out of the stomach but are apparently not strong enough to escape through the body wall. They consequently die in the coelomic cavity and become encapsulated by connective tissue.

Why so few encapsulated specimens have actually been reported is an intriguing question. Connective tissue within the coelomic cavity is incapable of breaking down a foreign body of this nature. It would eventually calcify but would remain in the tissue. The low number of eels encountered during this study, therefore, cannot be explained in this manner. As no eels have been encountered in the alimentary tracts of any fish examined, it is possible that this eel, probably through its burrowing behaviour, is not normally accessible to these fish and that it is only the occasional free-swimming individual which is preyed upon. Once taken it probably immediately bores its way into the coelomic cavity where it becomes 'mummified'. Another possible explanation is that because of their relatively large diameter (4–5 mm) the lesion caused by the passage of the eel through the stomach wall

would be fairly large, resulting in acute peritonitis and eventual death of the predators. Some may, nevertheless, survive the encounter.

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A note on the social structure of the kudu, *Tragelaphus strepsiceros*, in an agricultural area

M.A. du Plessis

Mammal Research Institute, University of Pretoria, Pretoria, 0002 Republic of South Africa

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The mean group size of kudus in an agricultural area was 3,9 and noticeably affected by hunting. A low male : female sex ratio was also recorded, but did not influence fecundity negatively.

Die gemiddelde groepgrootte van koedoes was 3,9 in 'n landbougebied en merkbaar deur jag beïnvloed. 'n Lae bul: koei-geslagsverhouding is gevind, maar het nie die aantelvermoë negatief beïnvloed nie.

Until recently the social organization of most tragelaphines was poorly understood. This is still true to a certain extent for the greater kudu *Tragelaphus strepsiceros*. Only two detailed accounts of grouping patterns and habitat preferences of kudu have been published and these were of kudus occurring in conservation areas (Underwood 1978; Allen-Rowland-