Fig. 1. *Plecodus paradoxus* Blgr. Dentition and isolated tooth (lateral view) after Poll (1948)

thing other than scales of live fish. When a *Plecodus* succeeds in attacking a fish, it pushes its mouth against the back of its victim for a short while. Then it swims away, leaving a denuded spot.

In the aquarium it seems that some species of fish know how to escape the attack of *Plecodus*, and they are able to drive them away from their shelter. For example, we have never seen a *Plecodus* 'scaling' a *Lamprologus savoryi* Poll, though a frequent fish in the *Plecodus*' environment, or a *Lobochilotes labiatus* or a *Simochromis curvifrons*. Some other fishes swim away from a *Plecodus* as soon as it appears (for example, *Lamprichthys tanganicanus*).

Of the four species of *Plecodus* (*Pl. paradoxus, straeleni, elaviae, multidentatus*) the first three were caught above a rocky bottom, the fourth one, above a muddy bottom, at considerable depth (90 m.). The first two are more littoral than *Pl. elaviae*. Sometimes, native fishermen catch *Pl. paradoxus* and *elaviae* with lines, baited with pieces of a small fish (*Stolothrissa tanganicae*). Thus it seems that adult *Plecodus* may secondarily turn to true carnivorous habits.

This peculiar way of feeding, so far as we know, has not been described in any marine fish, and the problem is how it has evolved from typical voracious habits. However, the dentition of *Plecodus*, with powerful band-like teeth, bending backwards (Fig. 1), seems, as Poll's figures show it, to be well adapted to that particular diet.

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[1] Poll, M., *Bull. Inst. Sci. Nat. Belg.*, 24, 26 (1948); 25, 33 (1949).

Occurrence of a Species of *Ornithodoros* in Britain

While visiting Puffin Island, at the north-east end of the Menai Straits (North Wales) on May 16, 1954, about a dozen specimens of an argasid tick consisting of late nymphal stages and adults of both sexes were collected from under a stone in a dry part of the cliff. They possessed the movable cheeks to the camerostome; the legs, which were micromammilate, lacked dorsal humps, and the disks on the dorsal surface of the body were large and conspicuous. They were identified as an *Ornithodoros* species of the *talaje* group. A critical examination of this group by comparison with specimens from the British Museum (Natural History) is now being made.

The presence of *Ornithodoros* in Britain is interesting for two reasons: (1) several species are well-known carriers of a number of important diseases; and (2) the genus has been regarded as confined to the tropics and sub-tropics. So far as we are aware, apart from this occurrence in Britain, the most northerly records of the species of the *O. talaje* group are from the Central and Eastern Mediterranean countries.

A second visit on June 9 to Puffin Island showed the incidence of *Ornithodoros* was much greater than we had hitherto imagined. The ticks were found under stones some twenty feet above high-water mark in a well-defined zone of soft fossiliferous calcareous shale which has been more extensively weathered and therefore recessed a foot or two between harder layers of Lower Carboniferous limestone. They occurred in this dry region in company with the beetle *Harpalus latus* (L.), the bristle tail *Petrobius maritimus* Ouds., the earwig *Forficula auricularia* L., and the mite *Molgus littoralis* (L.).

The rest of this small island was examined with the view of determining the distribution, and it was found that the ticks were present along the whole of the north-west cliff and around the north-east tip of the island, but only in places where this particular stratum was exposed. Numerous limestone outcrops, old limestone walls and a large number of nests of herring and lesser black-backed gulls over the top of the island were examined without success.

The numbers present on the island must amount to many thousands, for under small stones not more than six inches in diameter there were 10–100 ticks. The majority of these were in the adult stage, and a rough count showed that 1 per cent were engorged. Large numbers of egg clusters were also noted alongside adults during this second visit.

Although rabbits occur on the island, the main hosts were thought to be birds, and this was substantiated by the presence of avian blood in the engorged ticks. Curiously enough, the main concentrations of these ectoparasites were some way removed from any bird colonies, and in one or two instances the nearest nests on the same ledge were 70 ft. away, although nests up the cliff face were probably no farther than 40 ft. Nesting sites near the tick areas were examined, and one or two *Ornithodoros* were present in some nests of cormorant, shag, razorbill and herring gull. Many chicks of the last species occur on the rock ledges near the ticks and these are possibly the main hosts.

It is clear that this tick is well established as a breeding species in this locality. Whether it occurs in similar situations around the British Isles remains to be seen. We have taken the opportunity of examining the sea-bird colony on Bardsey Island, off the tip of Caernarvonshire, but no *Ornithodoros* were found. However, it is of interest to note that the ixodid tick, *Haemaphysalis punctata* (Can. et Fanz., 1877), which has hitherto been recorded in the British Isles only from south-east England, was common here in rough pastures.

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