The Shark, *Isurus oxyrinchus*, in South African Waters

THE isurid shark, *Isurus oxyrinchus* Rafinesque, 1810, although most closely related to the Indo-Pacific *I. glaucus* Müller and Henle, 1841, is apparently constantly and clearly differentiated in certain features, notably the height of the dorsal fin and the relative length of the head from snout tip to pectoral origin. Primarily of tropical and subtropical oceanic waters, this species has hitherto been known from a wide range in the Atlantic both east and west. It is extremely virile and vigorous, and is a game fish of repute much sought after by anglers.

Although known in mid-Atlantic at St. Helena, there has hitherto been no positive coastal record from West Africa south of about 12° N. The discovery of a specimen of undoubted *I. oxyrinchus* Rafinesque, off Algoa Bay (about lat. 34° S., long. 26° E.), is therefore of considerable interest. This is obviously a young specimen (see Figs. 1 and 2) which, taken on a line, gave the angler a spectacular fight.

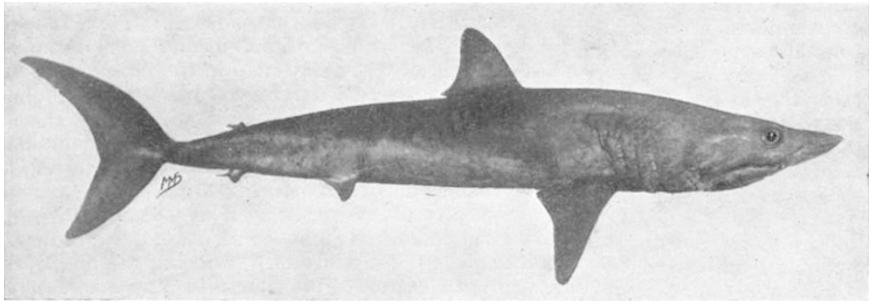

Fig. 1. *Isurus oxyrinchus* Rafinesque, 1810, ♂, 1,130 mm. total length, taken in Algoa Bay, South Africa

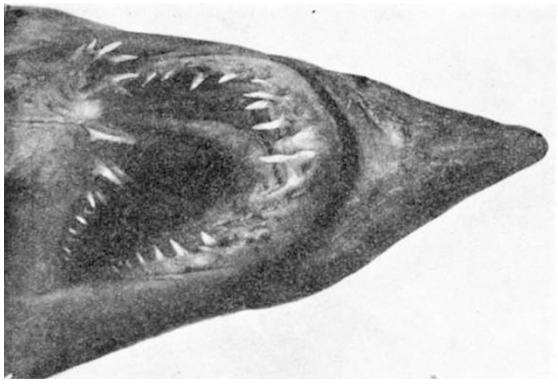

Fig. 2

The specimen is a young male, total length 1,130 mm. The following are percentages of total length: body to upper caudal pit, 80·0; depth of body at dorsal origin, 16·4; distance from snout tip to (1) first gill slit, 20·4; (2) pectoral origin, 25·6; (3) first dorsal origin, 38·0; (4) pelvic origin, 56·0; (5) second dorsal origin, 70·3; (6) anal origin, 72·2; (7) line connecting nostrils, 5·1; (8) front of mouth, 6·55. The internarial distance, 3·9; diameter of eye, 1·6; the interorbital, 6·0; width of mouth (equals height), 7·6; height of first dorsal, 8·85; its base, 8·42; distance from hind margin of eye to fourth gill slit, 17·5.

There are thirteen teeth on each side of each jaw, the third upper smaller, the front two on each side longer and more slender than all others. The body is coloured steel-blue above, white below. Weight 25 lb.

From information since received, it seems that this species may be not uncommon in South African waters.

J. L. B. SMITH

Department of Ichthyology,
Rhodes University,
Grahamstown,
South Africa.
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Effect of Galvanized Iron on Some Tree Seedlings

IT has become usual in Australian forest nurseries to grow tree seedlings in lacquered tin-plate tubes about 6 in. high and 1–1½ in. diameter, which contain sufficient soil for up to two seasons' growth before final planting. A shortage of tin-plate over recent years caused a change to the cheaper and more readily available galvanized iron.

Most varieties appeared unaffected by the change, but some species showed a yellowing of the foliage, stunting of growth and in some cases the death of the seedling after six months or more. Typical species affected are *Acacia spectabilis*, *Callitris cupressiformis*, *Casuarina suberosa*, *Eucalyptus grandis* and *Melaleuca hypericifolia*. For affected species, root growth was normal until the roots reached the tube, when further growth ceased, followed by progressive dying back of the roots until only those running straight downwards remained alive. A similar, but slower, process was seen with the roots of species which appear unaffected above ground, such as *Acacia decurrens*, *Casuarina cunninghamii*, *Eucalyptus saligna*, *Melaleuca bracteata* and *Tristania conferta*. Affected seedlings transplanted in time may recover, and there is some evidence that excessive watering may aggravate the trouble. Rusty tin-plate tubes or uncoated steel tubes, whether rusty or not, are satisfactory.

There have been reports that soils with high zinc contents have given rise to a similar chlorosis with other plants; zinc absorbed by the plant fixes available iron in the tissues so that it is no longer available for biochemical processes. A similar mechanism probably holds for chlorosis in galvanized iron seedling tubes.

In view of the convenience of galvanized sheet or wire as plant containers or protectors, this adverse effect is not so well known as it should be, particularly as there may be some effect not visible above ground. It has also been found that to dip the tubes in bitumen, as a convenient way of covering the zinc, is likely to kill the seedlings in tubes so treated. Experiments being carried out will be published elsewhere later.