

MONODONTA (OXYSTELE) FULGURATA
PHILIPPI, A SYNONYM OF
OXYSTELE VARIEGATA (ANTON)

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INTRODUCTION

During a survey of the intertidal fauna of rocky shores in South West Africa by the South African Museum, Cape Town, and the State Museum, Windhoek, a large number of specimens of *Oxysteles* were collected from localities in South West Africa and southern Angola. Comparison of this material with published descriptions and figures, and with a range of specimens from the South African coast, has led us to believe that all the specimens can be referred to *Oxysteles variegata* (Anton), and that *Monodonta (Oxysteles) fulgurata* Philippi, the common species of southern Angola, should become a synonym of *Oxysteles variegata*.

BRIEF SYNONYMY

Trochus variegatus Anton, 1839: 57.

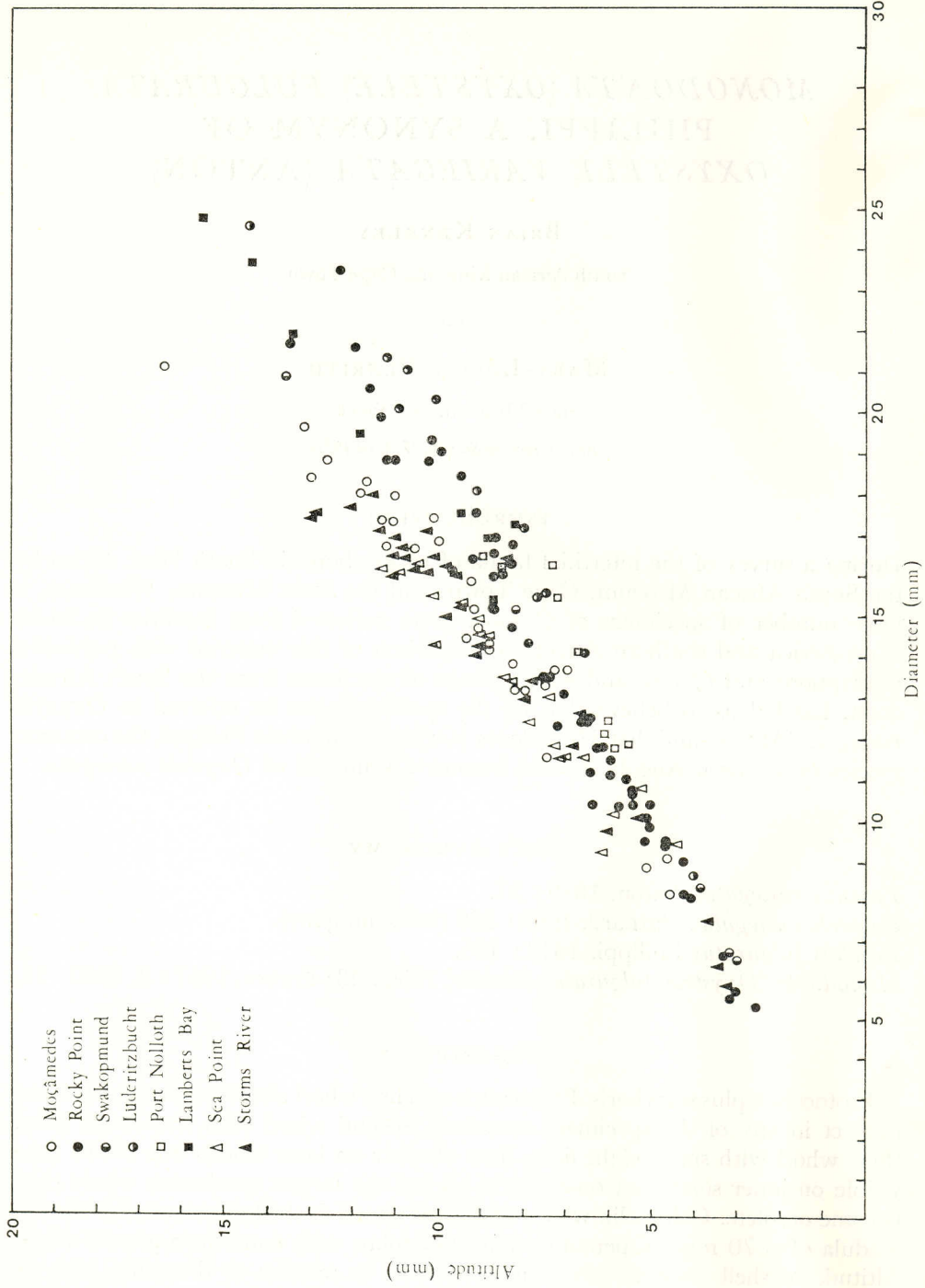
Oxysteles variegata: Barnard, 1963: 268 (full synonymy).

Trochus fulguratus Philippi, 1848: 106.

Monodonta (Oxysteles) fulgurata: Nicklés, 1950: 43; Franca, 1957: 8, 1960: 12.

DESCRIPTION

Protoconch plus six whorls. Protoconch and first whorl almost always eroded, not distinct in any of the specimens examined, second whorl with five or six lirae, third whorl with six to eight lirae, lirae obsolete on later whorls but 15-17 lirae visible on inner surface of outer lip in all but the largest specimens, where they become obsolete. Columella white, umbilicus closed at shell diameter of 5-6 mm. Radula of ± 70 rows. Operculum horny circular, with concentric growth rings. Altitude of shell (base to protoconch) variable in relation to diameter, high or



low forms occurring in the same population (Plate 1A), although the Moçâmedes, Storms River and Sea Point populations tended in general to have higher shells than those of Rocky Point, Swakopmund, Lüderitzbucht, Port Nolloth and Lambert's Bay (Fig. 1).

COLOUR VARIATIONS

Colour extremely variable, but, as stated by Barnard (1963) there is one constant feature, viz. a band under the suture of squarish dark spots, darker than the ground colour, alternating with pale spots. The ground colour varies from white, through yellow, grey, pink, green, red or brownish, to almost black. In the last case the dark spots below the suture merge into the ground colour, the light spots remaining distinct. The subsutural dark spots vary in number and size, and frequently give off dark flames which may form solid lines or have a zigzag effect. If the subsutural spots are few and large, the flames are broad, forming a few bold lines across the shell; if small and numerous, the lines are fine and if zigzag give a mottled or reticulate pattern. Occasionally the areas between the subsutural lines may be plain. The flames given off by the subsutural spots may be as dark as the spots, forming a maroon, dark brown, or black pattern on a white, yellow, pink, green, brown or red background; or they may be lighter than the spots. These forms with red lines on a white background are frequent. Several or all variations may occur in a single population; this is illustrated in Plate 1.

Inside of shell nacreous, with spiral lirae of body whorl distinct, becoming obsolete in very large specimens.

DISTRIBUTION

Nicklés (1950) gives the distribution of *Monodonta sagittifera* and *M. fulgurata* as Mauritania and Gabon to Moçâmedes respectively. With the lack of knowledge concerning the intertidal fauna of South West Africa, it is not surprising that this area represented a gap, with *M. fulgurata* to the north, and *O. variegata* to the south. *O. variegata* apparently occurs over the whole West African coast, as well as along the southern African coast. Barnard (1963) gave the eastern limit of distribution as Moçâmbique Island, and there is a specimen in the South African Museum collection to support this record. Mr. R. Kilburn, of the Natal Museum (personal communication) states that *O. variegata* does not occur on the Natal coast although the possibility of rare stragglers exists, and it seems probable that the normal range of distribution of *O. variegata* does not lie further north-east than Pondoland. It would seem that this species has a wide temperature tolerance, being found in both the tropical waters of the west African coast, the warm temperate waters of southern Angola and the eastern South African coast, as well as in the cold waters of the west coast of South Africa and southern South West Africa.

MATERIAL

Samples from the following localities were examined: Praia das Conchas, Moçâmedes; Rocky Point; Swakopmund; Lüderitzbucht; Port Nolloth; Lambert's Bay; Oudekraal; Mouille Point; Still Bay; Storm's River Mouth.

DISCUSSION

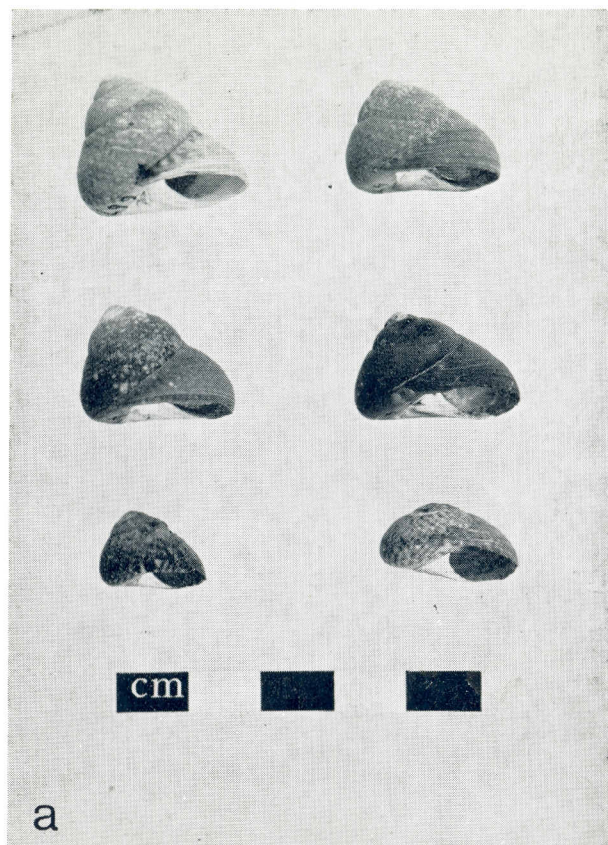
Barnard (1963) synonymised *O. sagittifera* with *O. variegata*. The figures of Nicklés (1950) show *M. sagittifera* as a flatter shell than *M. fulgurata*, with more noticeably zigzag markings. From the material we have examined it appears that marking and shell-forms are of little value in specific determination, as both are extremely variable (Plate 1, Fig. a). We can find no characters which could be used to separate the Angolan from the southern African forms, yet they agree perfectly with Nicklés figure of *M. fulgurata*, and with specimens of *M. fulgurata* identified by Paes da Franca. For these reasons we feel that *M. (O.) fulgurata* should become a synonym of *O. variegata*, the latter apparently being the oldest valid name.

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a. Variation in altitude amongst animals from the same locality (Table Bay).
 b. Variation in colour pattern within the same population (Table Bay).

