

# Notes on Indo-Pacific Scleractinian Corals

## Parts I and II

### Part I. *Oryzotrochus*, a New Genus of Turbinolian Coral

JOHN W. WELLS<sup>1</sup>

IN 1954 the writer spent a few days studying part of the coral collections of the Australian Museum. Among much undetermined material was a lot consisting of two species of very small turbinolian corals from a dredge haul (source unknown) made at the northern end of the Great Barrier Reef. One species was *Holcotrochus scriptus* Dennant 1902, a most peculiar form previously recorded only from the Lower Miocene and Pliocene of South Australia and from depths of 38–185 meters off South Australia. It was represented by some 20 individuals, 1 of which is illustrated in Figures 6 and 7. The other species, represented by 100 specimens, mostly more or less damaged, proved to be a new turbinolian genus, here called *Oryzotrochus* in allusion to its resemblance to a rice grain.

Special thanks are due to F. J. McNeill of the Australian Museum for permission to re-

tain several specimens for description.

Family CARYOPHYLLIIDAE

Subfamily TURBINOLIINAE

*Oryzotrochus* gen. nov.

Small, solitary, free, conical corals. Wall imperforate, externally costate with prominent, high, smooth costae. Septa exsert, smooth margined, lightly granulated laterally. Pali absent. Columella small and styliiform.

This genus is obviously very closely allied to the well-known Tertiary (Eoc.-Mioc.) genus *Turbinolia*,<sup>2</sup> from which it is distinguished only by the absence of mural perforations or external intercostal pits. The more apparent differences from other conical turbinolians are brought out in the following artificial key.

#### A. Wall perforate or with deep intercostal pits:

##### 1. Pali absent:

- a. Columella spongy . . . . . *Bothrophoria* Felix (U. Cret.)
- b. Columella styliiform:
  - aa. Costae smooth . . . . . *Turbinolia* Lamarck (Eoc.-Mioc.)
  - bb. Costae hispid . . . . . *Batotrochus* Wells (Rec.)

##### 2. Pali present:

- a. 1 crown of 6 before second cycle;
  - costae smooth . . . . . *Conocyathus* d'Orbigny (Eoc.-Rec.)
- b. Pali weakly developed;
  - costae hispid . . . . . *Trematotrochus* Tenison-Woods (Olig.-Rec.)

#### B. Wall imperforate:

- 1. Paliform lobes absent . . . . . *Oryzotrochus* n.g. (Rec.)
- 2. Paliform lobes present . . . . . *Notocyathus* Tenison-Woods (Eoc.-Rec.)

<sup>1</sup> Department of Geology, Cornell University, Ithaca, N. Y. Manuscript received February 17, 1958.

<sup>2</sup> *Turbinolia australiensis* Gardiner 1939 (*Discovery Reports*, vol. 18, p. 332, pl. 21, figs. 1, 2), from Port Jackson, N. S. Wales, is *Conocyathus zelandiae* Duncan 1876.



Typespecies: *Oryzotrochus stephensoni* n. sp.

*Oryzotrochus stephensoni* sp. nov.

Figs. 1–5

With the characters of the genus as diagnosed above. Septa 12 in number, in two cycles, thin, upper margins evenly arched and equally exsert over the wall and dropping steeply to level of the columella about half-way between wall and axis. Septa generally all extending to and fusing with the columella, but secondaries in one or two systems may join primaries short of the columella. Costae corresponding to all septa, equal, high, smooth-margined, separated by relatively broad and flat interspaces. An irregular row of very small buttresslike expansions on each side of each costa at junction with the wall. Primary costae distinct to the base; secondary costae arising just short of the base. Columella

a slender style elevated about to height of exsert septal margins.

#### Dimensions

	HEIGHT	CALICULAR DIAMETER	
Holotype	3.5 mm.	1.7	(Figs. 3, 4)
Paratype	3.0	1.5	(Fig. 5)
Paratype	3.3	1.6	(Fig. 1)
Paratype	2.4	1.5	(Fig. 2)

Named for W. Stephenson, Professor of Zoology, University of Queensland.

Holotype and figured paratypes to be deposited in the U. S. National Museum. Remaining paratypes are in the Australian Museum.

#### Locality

Murray Islands (9°55'S., 144°02'E.), near northern end of Great Barrier Reef, Queensland, 9–15 meters.

## Part II. A New Species of *Turbinaria* from the Great Barrier Reef

AT LEAST 350 species representing 57 genera of reef-building scleractinian corals are now known from the Great Barrier Reef area (Wells, 1955: 21). It would seem ungracious to add a new species to this burdensome total, especially to a genus with 34 species already reported from this region, many of them of doubtful validity, but the form described below is so distinct that it cannot be referred to any known species of *Turbinaria*.

### Family DENDROPHYLLIIDAE

#### Genus TURBINARIA Oken 1815

#### *Turbinaria heronensis* sp. nov.

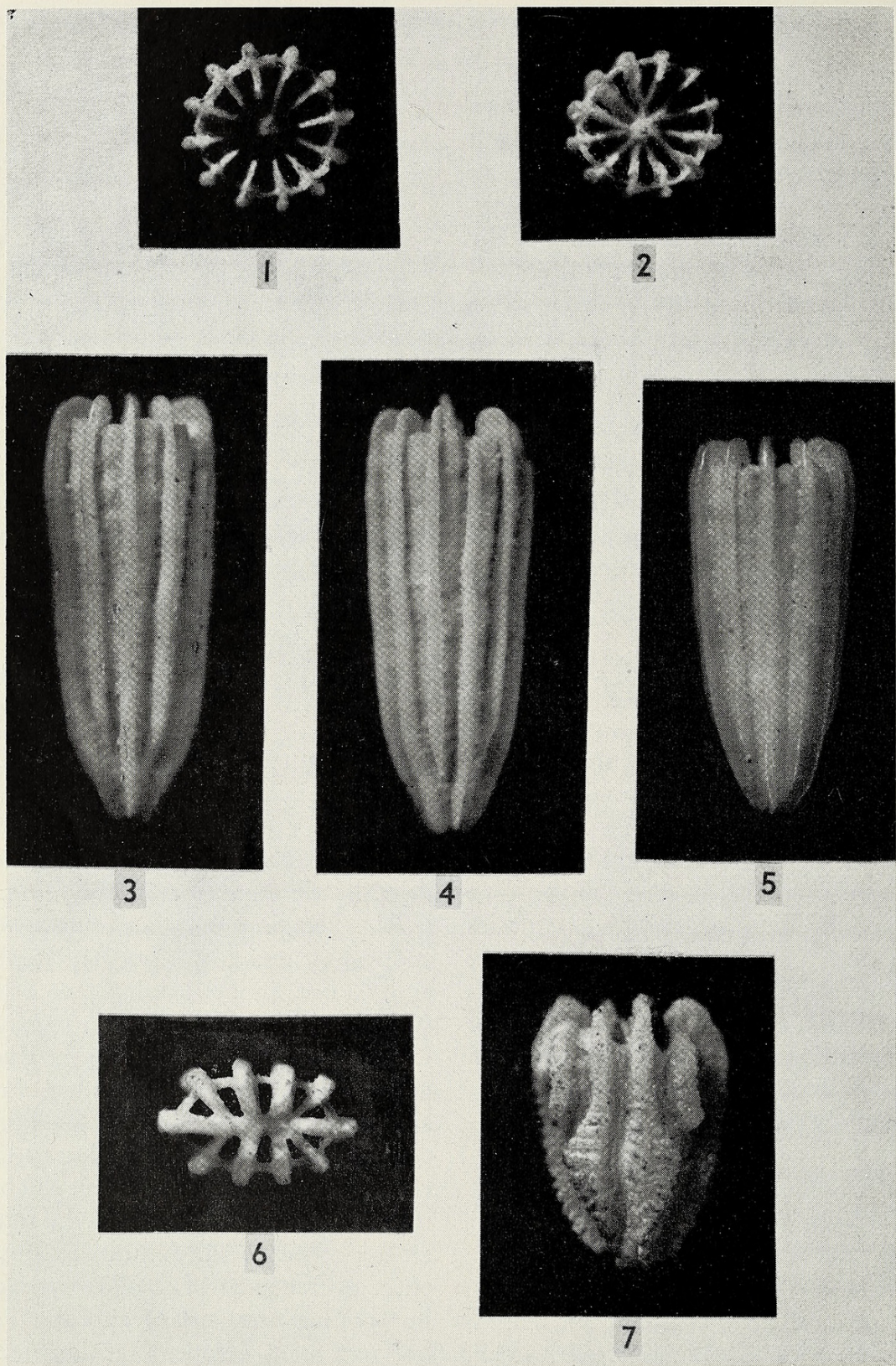
Figs. 1–4

Corallum bushy, to 20 cm. in height, formed by erect branches arising from a small, encrusting base. Corallites tending to develop irregularly on opposite sides of flattened and

twisted branches, new extratentacular buds appearing in the plane of the branches between the previously formed and the next previously formed corallites. Corallites cylindrical, rarely more than 10 mm. long without buds, averaging 4 mm. in diameter. Wall spongy. Calices deep (3 mm.), circular, averaging 3 mm. in internal diameter. Septa thick peripherally in the wall, thin axially, upper margins dropping abruptly to the level of the columella, 36 to 40 in number, irregularly arranged, with 24 to 30 extending to the columella, the remainder fusing to lower cycles of septa. Columella a deep, chcoraceous, trabecular column about half the internal diameter of the corallites. Coenosteum and exterior of free parts of corallites very compact but porous, the surface appearing smooth, but very finely vermiculo-echinulate.

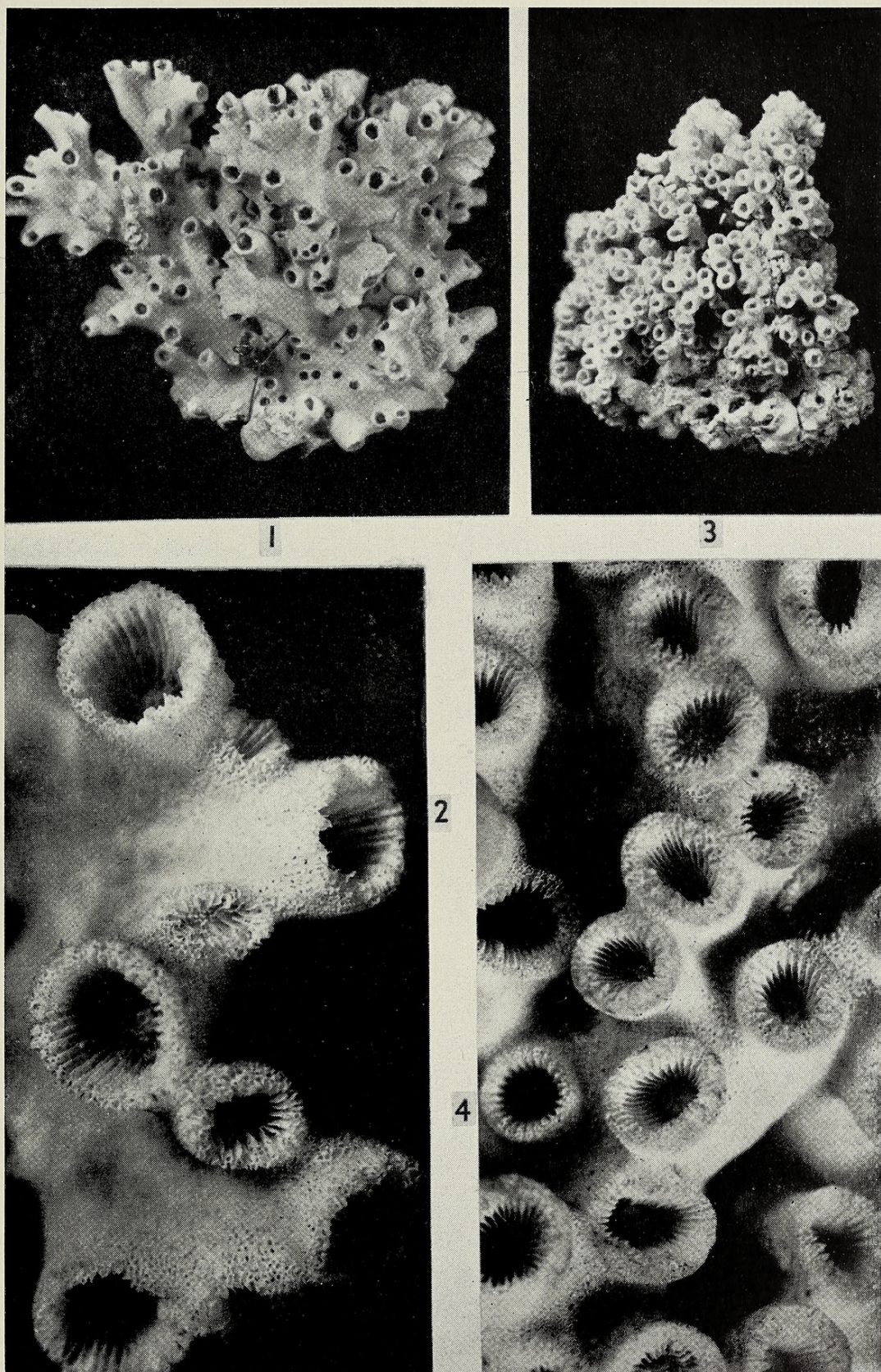
This species is readily distinguished from practically all other known recent species of





FIGS. 1-5. *Oryzotrochus stephensoni* n. gen., n. sp. 1, 2, Calicular aspect of two paratypes. 3, 4, Lateral aspects of holotype. 5, Lateral aspect of paratype. 6, 7, *Holcotrochus scriptus* Dennant. Calicular and lateral aspects. (All figures 15X.)





FIGS. 1, 2. *Turbinaria heronensis* n. sp. 1, Lateral aspect of holotype corallum,  $\times 0.4$ . 2, Calices of same,  $\times 4$ . 3, 4. *T. heronensis*. 3, Calicular aspect of rough-water facies (paratype),  $\times 0.4$ . 4, Calices of same,  $\times 4$ .





Wells, John West. 1959. "Notes on Indo-Pacific Scleractinian Corals Parts I and II Part 1. *Oryzotrochus*, a New Genus of Turbinolian Coral." *Pacific science* 13(3), 286–290.

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