

## South African pyramidellacean gastropod names

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Twelve names for South African pyramidellacean gastropod species require replacement on grounds of primary homonymy: *Turbonilla jozinae* nom. nov. for *T. tenuis* Turton, 1932, not Von Koenen, 1891; *Pyrgiscus ninettae* nom. nov. for *Turbonilla helena* Bartsch, 1915, not Semper, 1861; *Pyrgiscus allenai* nom. nov. for *Turbonilla cancellata* Turton, 1932, not Holmes, 1860; *Pyrgulina scripta* nom. nov. for *Turbonilla sculpturata* Turton, 1932, not Oliver, 1915; *Odostomia barnardi* nom. nov. for *O. erecta* Turton, 1932, not *Odontostoma erectum* Von Koenen, 1891; *Odostomia dyma* nom. nov. for *O. didyma* Turton, 1932, not Verrill & Bush, 1900; *O. gittenbergeri* nom. nov. for *O. dulcis* Turton, 1932, not Pilsbry & Johnson, 1917; *Hinemoa crassella* nom. nov. for *Odostomia crassicostata* Turton, 1932, not May, 1916; *Chrysallida vanbruggeni* nom. nov. for *Odostomia ornata* Turton, 1932, not Wood, 1872; *Chrysallida africana* nom. nov. for *Odostomia formosa* Turton, 1932, not Jeffreys, 1848; *Evalea carinae* nom. nov. for *Odostomia io* Turton, 1932, not Dall & Bartsch, 1909; and *Pyrgulina durabilis* nom. nov. for *Odostomia robusta* Sowerby, 1901, not *Odontostomia robusta* Hedley, 1899. In addition, there is one clear case of secondary homonymy that requires replacement: *Pyrgulina sowerbyi* nom. nov. for *Odostomia pretiosa* Turton, 1932, not *Pyrgulina pretiosa* Dautzenberg & Fischer, 1907. While other genus-group taxa are long known from South Africa, there is no previous African record of *Hinemoa*.

Five names were previously offered as replacements. Each requires discussion. Three were introduced twice. Two were offered without adequate identification of the need for the name. These five names are *Turbonilla secura* Dall & Bartsch, 1906 = *T. secura* Bartsch, 1915 nom. nov. for *T. obeliscus* Gould, 1861; *Odostomia tomlini* Turton, 1933a = *O. tomlini* Turton, 1933b nom. nov. for *O. obtusa* Turton, 1932; *Odostomia becki* Turton, 1933a = *O. becki* Turton, 1933b nom. nov. for *O. obeliscus* Turton, 1932; *Odostomia lavertinae* Smith, 1901 nom. nov. for *O. angasi* Sowerby, 1892.

The name *Odostomia ornata* H. & A. Adams, 1853, cannot be tied to any taxon. It is a nomen nudum and should not be used. *Polyspirella* Carpenter in Gould, 1861, is the only pyramidellacean genus-group taxon with a South African type species. We refer the following species to *Polyspirella*: *P. trachealis* (Gould, 1861) from *Chemnitzia*; *P. aglaia* (Bartsch, 1915) from *Turbonilla* (*Cingulina*); *P. acutilirata* (Sowerby, 1892) from *Cingulina*; *P. pellucida* (Sowerby, 1892) from *Cioniscus* and *P. callista* (Bartsch, 1915) from *Turbonilla* (*Cingulina*). In addition, *P. pellucida* (Sowerby, 1892) seems inseparable from the supposed subspecies *P. p. affinis* (Turton, 1932). Referring these species to *Polyspirella* creates five new combinations of generic and specific names. Five other new combinations are suggested: *Pyrgulina whitechurchi* (Turton, 1932), from *Turbonilla*; *Pyrgiscus prolongatus* (Turton, 1932) from *Turbonilla*; *Hinemoa ficara* (Bartsch, 1915) from *Odostomia*; *Pyrgulina arfica* (Bartsch, 1915) from *Odostomia* and *Pyrgulina semiplicata* (Turton, 1932) from *Odostomia*.

Key words: Gastropoda, Opisthobranchia, Pyramidellacea, nomenclature, South Africa.

## INTRODUCTION

Most original descriptions of South African pyramidellacean gastropods are rooted in the beach and shallow-water collecting of William H. Turton (Tomlin, 1938). Turton (1932) monographed his collection after parts of it were studied by Paul Bartsch (1915) and by Edgar A. Smith (e.g.: 1904). Work on the Turton collection created scores of nominal species. Additional species come from the study of other South African coastal and shallow-water collections (e.g.: Sowerby, 1892; 1897; 1901; Barnard, 1963) and from the coastal work of oceanographic expeditions (e.g.: Gould, 1861). The number of named South African pyramidellacean species now approaches 140. Twenty-six present nomenclatural problems. Problems are reviewed here, primarily through brief synonymies. In addition, the name *Polyspirella* Carpenter in Gould, 1861, has long been viewed as a junior subjective synonym of *Cingulina* A. Adams, 1860, or of *Turbonilla* Risso, 1826. Such synonymies are here rejected.

## NEW NAMES

Thirteen names currently applied to South African species are both preoccupied and in need of replacement. Where homonymy is complex, a discussion is provided. For simple cases, a minimal synonymy is considered to be sufficient.

(1) ***Turbonilla jozinae*** nom. nov.

*Turbonilla tenuis* Turton (1932: 94, pl. 21 fig. 687).

NOT *Turbonilla evoluta tenuis* Von Koenen (1891: 627-628, pl. 43 fig. 14a-b).

NOT *Turbonilla tenuis* Pallary (1904: 238, pl. 7 fig. 19).

NOT *Turbonilla rosewateri* Corgan & Van Aartsen (1993: 95) (= *T. tenuis* Pallary).

Remarks. — Turton's species and Pallary's bore the same name as Von Koenen's. Both require replacement.

Derivatio nominis. — *T. jozinae* is named after the wife of the first author.

(2) ***Pyrgiscus ninettae*** nom. nov.

*Turbonilla (Pyrgiscus) helena* Bartsch (1915: 77, pl. 14 fig. 1).

*Turbonilla helena* Bartsch, Turton (1932: 95).

NOT *Turbonilla helena* Semper (1861: 364).

Remarks. — While *Pyrgiscus* Philippi, 1841, has sometimes been ranked as a subgenus of *Turbonilla* Risso, 1826, subgeneric ranking is rare in recent decades. This species and the next belong in *Pyrgiscus*.

Derivatio nominis. — This species is named after a daughter of the first author.

(3) ***Pyrgiscus altenai*** nom. nov.

*Turbonilla cancellata* Turton (1932: 99, pl. 21 fig. 724).

NOT *Turbonilla cancellata* Holmes (1860: 84, pl. 13 fig. 6a-b).

Derivatio nominis. — Named after Dr. C.O. van Regteren Altena (1907-1976), late curator of molluscs of the Rijksmuseum van Natuurlijke Historie.

(4) **Odostomia barnardi** nom. nov.

*Odostomia erecta* Turton (1932: 104, pl. 23 fig. 755).

NOT *Odontostoma erectum* Von Koenen (1891: 613-614, pl. 43 figs. 26a-c).

Remarks. — Von Koenen viewed *Odontostoma* Turton, 1830, as an emendation of *Odostomia* Fleming, 1813 (e.g.: Von Koenen, 1891: 610-611), attributing authorship of *Odontostoma* to Fleming-Turton. Thus the names *O. erectum* Von Koenen and *O. erecta* Turton are primary homonyms even though Von Koenen's concept of *Odontostoma* may be incorrect. Like names of species, names of authors can be troubling. *Odontostoma* was proposed by William Turton in the 1830s. *Odostomia erecta* was proposed by William Turton in the 1930s. The older Turton was the great uncle of the younger (Tomlin, 1938).

Derivatio nominis. — The species is named after the malacologist Dr. K.H. Barnard (1887-1964) of the South African Museum, Cape Town.

(5) **Odostomia dyma** nom. nov.

*Odostomia didyma* Turton (1932: 106, pl. 23 fig. 767).

NOT *Odostomia didyma* Verrill & Bush (1900: 533, pl. 65 fig. 14).

(6) **Odostomia gittenbergeri** nom. nov.

*Odostomia dulcis* Turton (1932: 107, pl. 24 fig. 775).

NOT *Odostomia dulcis* Pilsbry & Johnson (1917: 182).

Derivatio nominis. — Named after Prof. Dr. E. Gittenberger, curator of molluscs at the Leiden museum and professor of systematic zoology at Leiden University.

(7) **Hinemoa crassella** nom. nov.

*Odostomia crassicostata* Turton (1932: 103, pl. 23 fig. 749).

NOT *Odostomia crassicostata* May (1916: 91).

Remarks. — Barnard (1963: 93) suggested that this species is identical with *O. ficara* Bartsch, 1915. Turton (1932: 103) viewed them as distinct but similar; we agree with Turton. Both belong in the genus *Hinemoa* Oliver (1915: 531). Some rank *Hinemoa* as a genus, while others consider it a taxon of lesser rank; we follow Laseron (1959). There are no prior records of the genus *Hinemoa* in African faunas.

(8) **Chrysallida vanbruggeni** nom. nov.

*Odostomia ornata* Turton (1932: 101, pl. 22 fig. 736).

NOT *Odostomia ornata* H. & A. Adams (1853: 232).

NOT *Odostomia (Nodostomia) ornata* S. Wood (1872: 64).

Remarks. — The name introduced by H. & A. Adams was a replacement for *O. decorata* C.B. Adams but C.B. Adams never published such a name. Further, he did not apply a similar name to any species that could reasonably be transferred to *Odostomia* (Clench & Turner, 1950; Turner, 1956). This name was introduced in error and should be viewed as a nomen nudum. While *Odostomia ornata* H. & A. Adams does not preoccupy either Wood's name or Turton's, Wood's name is a senior primary homonym of Turton's. Barnard (1963: 92) considered *O. ornata* Turton to be a synonym of *O. formosa* Turton. We do not agree. Both are here viewed as species of *Chrysallida* Carpenter, 1856. Some have ranked *Chrysallida* as a subgenus of *Odostomia* Fleming, 1813 (e.g.: Dall & Bartsch, 1909). Others considered it distinct from *Odostomia* at the subfamilial level (e.g.: Saurin, 1958). We follow modern practice in ranking *Chrysallida* as a genus.

Derivatio nominis. — This species is named after the malacologist Dr. A.C. van Bruggen (Leiden University 1966-1994).

(9) **Chrysallida africana** nom. nov.

*Odostomia formosa* Turton (1932: 101-102, pl. 22 fig. 737).

NOT *Odostomia formosa* Jeffreys (1848: 347).

(10) **Evalea carinae** nom. nov.

*Odostomia io* Turton (1932: 104, pl. 23 fig. 758).

NOT *Odostomia (Evalea) io* Dall & Bartsch (1909: 199, pl. 22 fig. 4).

Remarks. — While some have ranked *Evalea* A. Adams, 1860, as a subgenus of *Odostomia* Fleming, 1813, we follow prevailing practice in ranking *Evalea* as a genus (e.g. Laseron, 1959).

Derivatio nominis. — The species is named after a daughter of the first author.

(11) **Pyrgulina scripta** nom. nov.

*Turbonilla sculpturata* Turton (1932: 95, pl. 21 fig. 695).

NOT *Turbonilla sculpturata* Oliver (1915: 530, pl. 10 fig. 20).

Remarks. — We believe this species belongs in the genus *Pyrgulina* A. Adams, 1863. *Turbonilla whitechurchi* Turton (1932: 95, pl. 21, fig. 694) also belongs in *Pyrgulina*.

(12) **Pyrgulina durabilis** nom. nov.

*Odostomia (Pyrgulina) robusta* Sowerby (1901: 214, pl. 22 fig. 19).

NOT *Odontostomia robusta* Hedley (1899: 556, fig. 70).

Remarks. — *Odontostomia* Jeffreys (1839: 34) was offered as an emendation of, and replacement for, *Odostomia* Fleming, 1813, on grounds of linguistic purity. Under current rules for naming genera (International Code of Zoological Nomenclature, 1985) *Odontostomia* is an unjustified emendation, without status in zoological nomenclature. Thus, Hedley's species and Sowerby's are objective homonyms. Barnard (1963: 94) suggested

that Sowerby's species might be identical with *Odostomia arfica* Bartsch, 1915, and *O. simplicata* Turton. We believe that all are distinct species of *Pyrgulina*.

(13) **Pyrgulina sowerbyi** nom. nov.

*Odostomia pretiosa* Turton (1932: 102, pl. 22 fig. 739)

NOT *Pyrgulina pretiosa* Dautzenberg & Fischer (1907: 197, pl. 7 fig. 6).

Remarks. — This differs from earlier cases because it involves secondary homonymy. The problem arises when Turton's species is assigned to *Pyrgulina* where we feel it belongs.

Derivatio nominis. — Named after the Sowerby dynasty, three famous British conchologists.

MINOR PROBLEMS

Six additional names require clarification. One is potentially homonymous but does not require replacement if current generic assignments are accepted. Three are confusing because they were replaced twice, in each case by using the same replacement name. Two others were replaced without a clear discussion of the need for replacement.

(14) *Pyrgiscus prolongatus* (Turton, 1932)

*Turbonilla prolongata* Turton (1932: 100, pl. 22 fig. 727).

NOT *Chemnitzia prolongata* Carpenter (1857: 429).

NOT *Turbonilla (Turbonilla) prolongata* (Carpenter), Dall & Bartsch (1909: 33, pl. 2 fig. 18).

Remarks. — Carpenter's species is continued to be regarded as a *Turbonilla (Turbonilla)* (e.g.: Skoglund, 1992: 126). Since Turton's species is a *Pyrgiscus*, no replacement name is necessary. Many authors, following early experts such as Dall & Bartsch, treat *Pyrgiscus* and many other taxa as subgenera of *Turbonilla*. In this view, a replacement name would be needed.

(15) *Polyspirella pellucida* (Sowerby, 1897)

*Cioniscus pellucidus* Sowerby (1897: 13, pl. 6 fig. 10)

*Turbonilla pellucida* (Sowerby), Turton (1932: 98, pl. 21 fig. 718).

*Turbonilla pellucida affinis* Turton (1932: 98, pl. 21 fig. 719).

NOT *Chemnitzia affinis* C.B. Adams (1852: 389, 535).

NOT *Turbonilla (Strioturbonilla) affinis* (C.B. Adams), Dall & Bartsch (1909: 56, pl. 4 fig. 14).

Remarks. — While Turton ranked his taxon as a subspecies distinct from *T. pellucida pellucida*, we believe they are one taxon, properly placed in *Polyspirella* Carpenter in Gould, 1861.

The genus-group taxon *Polyspirella* was erected for a South African species viz., *Chemnitzia trachealis* Gould, 1861. The type-specimen of this species has been figured by Bartsch (1915: 82, pl. 17 fig. 1). From this figure and the accompanying description it is clear that Turton's species is closely related to Gould's and should be considered congeneric.

In the global fauna, we believe *Polyspirella* is improperly interpreted, perhaps because Gould's *Chemnitzia trachealis* remained unillustrated for over 60 years. We believe *Polyspirella* should be ranked as a genus. It includes the following South African species: The type species, *Chemnitzia trachealis* Gould (1861: 407), *Turbonilla (Cingulina) aglaia* Bartsch (1915: 83, pl. 17 fig.3), *Turbonilla (Cingulina) callista* Bartsch (1915: 83, pl. 17 fig. 2), and *Cioniscus pellucidus* Sowerby (1897: 13, pl. 6 fig. 10). *Cingulina acutilirata* Sowerby (1892: 27, pl. 1. fig. 32) may also belong here. Recognizing *Polyspirella* as a genus simplifies the systematics of South African pyramidellaceans by gathering similar species that once were referred to at least four different genus-group taxa.

(16) *Turbonilla (Strioturbonilla) securo* Dall & Bartsch, 1906

*Turbonilla obeliscus* Gould (1861: 406).

*Turbonilla (Strioturbonilla) securo* Dall & Bartsch (1906: 339). (= *T. obeliscus* Gould).

*Turbonilla securo* Bartsch (1915: 76, pl. 17 fig. 7) (= *T. obeliscus* Gould).

*Turbonilla securo* Bartsch, Turton (1932: 93).

*Turbonilla securo* Dall & Bartsch, Corgan (1967: 142).

NOT *Chemnitzia obeliscus* C.B. Adams (1850: 72-73).

NOT *Turbonilla (Strioturbonilla) obeliscus* (C.B. Adams), Dall & Bartsch (1906: 339).

Remarks: Bartsch offered a replacement name that had previously been offered by Dall & Bartsch. The name dates from the first introduction.

(17) *Odostomia tomlini* Turton, 1933

*Odostomia obtusa* Turton (1932: 104, pl. 23, fig. 754).

*Odostomia tomlini* Turton (1933a: Errata).

*Odostomia tomlini* Turton (1933b: 370).

NOT *Odostomia obtusa* Gould (1861: 405).

NOT *Odostomia obtusa* Harmer (1923: 836, pl. 64 fig. 16).

NOT *Odostomia harmeri* Corgan (1969: 359) (= *O. obtusa* Harmer).

Remarks. — Turton's species and Hamers's bore the same name as Gould's. All are meaningful taxa and the two junior homonyms required replacement. When Turton realized that some names he proposed in 1932 were preoccupied, he prepared a sheet of corrections called "Errata" and dated 14 February 1933, this sheet was to be pasted into his book. At least in some copies it is on the inside of the front cover. Turton published the same information in a journal article (Turton, 1933b) issued in December 1933. Apparently the Errata was published before the article.

(18) *Odostomia becki* Turton, 1933

*Odostomia obeliscus* Turton (1932: 105, pl. 23 fig. 761).

*Odostomia becki* Turton (1933a: Errata).

*Odostomia becki* Turton (1933b: 371).

NOT *Odostomia obeliscus* Garrett (1873: 226-227, pl. 3 fig. 51).

Remarks. — This name has a publication history similar to that of *O. tomlini* Turton, discussed in the prior synonymy.

(19) *Odostomia lavertinae* Smith, 1901

*Odostomia angasi* Sowerby (1892: 26, as of Tryon).

*Odostomia lavertinae* E.A. Smith (1901: 108).

NOT *Odostomia angasi* Tryon (1886: 362, pl. 79, fig. 68).

Remarks. — Smith gave the name *O. lavertinae* to the shells cited as *O. angasi* Tryon, 1886 by Sowerby (l.c.) because they belong to a different species.

## REFERENCES

- AARTSEN, J.J. VAN, 1981. European Pyramidellidae: II. Turbonilla. — *Boll. malac.* 17: 61-88.
- ADAMS, A., 1860. *Mollusca Japonica*. New species of Chrysallida and Parthenia. — *Ann. mag. nat. Hist.* 5: 477-499.
- ADAMS, C.B., 1850. Description of supposed new species of marine shells which inhabit Jamaica (Contd.). In C.B. Adams, *Contributions to Conchology* 5: 69-75.
- , 1852. Catalogue of shells collected at Panama with notes on synonymy, station, and habitat. — *Ann. Lyceum Nat. Hist. New York* 5: 222-549.
- ADAMS, H., & A. ADAMS, 1853-1858. The genera of Recent Mollusca; arranged according to their organization 1: 1-484; 2: 1-661 (dates of publication by page are given on page 661).
- BARNARD, K.H., 1963. Contributions to the knowledge of South African marine Mollusca. Part III. Gastropods: Prosobranchiata: Taenioglossa. — *Ann. S. Afr. Mus.* 67: 1-199.
- BARTSCH, P., 1915. Report on the Turton Collection of South African marine mollusks, with additional notes on the South African shells contained in the United States National Museum. — *Bull. U. S. Natn. Mus.* 91: 1-305.
- CARPENTER, P.P., 1857. Catalogue of the collection of Mazatlan Shells in the British Museum collected by Frederick Reigen: 1-552. London.
- CLENCH, W.J., & R.D. TURNER, 1950. The Western Atlantic marine Molluscs described by C.B. Adams. — *Occ. Pap. Moll.* 1: 233-403.
- CORGAN, J.X., 1967. *Turbonilla secura*. — *Nautilus* 80: 142.
- , 1969. Pliocene (?) *Odostomia* from St. Erth, Cornwall. — *Proc. malac. Soc. Lond.* 38: 359.
- , & J.J. VAN AARTSEN, 1993. Nomenclatural notes on some European turbonillid gastropods. — *Boll. malac.* 29: 95-96.
- DALL, W.H., & P. BARTSCH, 1906. Notes on Japanese, Indopacific and American Pyramidellidae. — *Proc. U. S. Natn. Mus.* 30: 321-369.
- , 1909. A monograph of the West American pyramidellid mollusks. — *Proc. U. S. Natn. Mus.* 68: I-XII, 1-258.
- DAUTZENBERG, P., & P.M.H. FISCHER, 1907. Contribution à la faune malacologique de l'Indo-Chine. — *J. Conchyl., Paris* 54: 145-226.
- GARRETT, A., 1873. Descriptions of new species of marine shells inhabiting the South Sea Islands. — *Proc. Acad. Nat. Sci. Philadelphia.* (1873): 209-233.
- GOULD, A.A., 1861. Descriptions of shells collected in the North Pacific Exploring Expedition under Captains Ringgold and Rodgers. — *Proc. Boston Soc. Nat. Hist.* 7: 400-409.
- HARMER, F.W., 1923. The Pliocene Mollusca of Great Britain, being supplementary to S.V. Wood's Monograph of the Crag Mollusca. — *Paleontogr. Soc. Mon.* 67, 2: 705-856.
- HEDLEY, C., 1899. The Mollusca of Funafuti (Supplement). — *Mem. Austr. Mus.* 3: 547-565.
- HOLMES, F.S., 1860. Post-Pleiocene fossils of South Carolina: 1-118. Charleston.
- JEFFREYS, J.G., 1839. A list of the marine Mollusca taken during a few days stay at Oban in Argyllshire, in the autumn of 1838. — *Malac. conch. Mag.* 2: 23-46.

- —, 1848. On the Recent species of *Odostomia*, a genus of gasteropodous mollusks, inhabiting the seas of Great Britain and Ireland. — *Ann. Mag. nat. Hist.* 2: 330-351.
- KOENEN, A. VON, 1891. Das Norddeutsche Unteroligocän und seine Mollusken-fauna Lieferung III. Naticidae-Pyramidellidae-Eulimidae-Cerithidae-Turritellidae. — *Abh. geolog. Specialkarte Preussen Thüring Staaten* 10: 575-817.
- LASERON, C.F., 1959. Family Pyramidellidae (Mollusca) from Northern Australia. — *Austr. J. Mar. Freshw. Res.* 10: 177-267.
- MAY, W.L., 1916. Additions to the Tasmanian marine Mollusca with descriptions of new species. — *Proc. Roy. Soc. Tasm.* (1915): 75-93.
- OLIVER, W.R.B., 1915. The Mollusca of the Kermadec Islands. — *Trans. N. Z. Inst.* 47 (1914): 509-568.
- PALLARY, P., 1904. Addition à la faune malacologique de Golfe de Gabès. — *J. Conchyl. Paris* 12: 212-248
- PILSBRY, H.A., & C.W. JOHNSON, 1917. New Mollusca from the Santo Domingo Oligocene. — *Proc. Acad. Nat. Sci. Philadelphia* 69: 150-205.
- SAURIN, E., 1958. Pyramidellidae de Pho-Hai (sud Viet-Nam). — *Ann. Fac. Sci. Saigon* (1958): 63-86.
- SEMPER, J.O., 1861. Beiträge zur Kenntniss der Tertiärformation. — *Arch. Ver. Freund. Naturgesch. Mecklenburg* 15: 221-409.
- SKOGLUND, C., 1992. Additions to the Panamic Province gastropod (Mollusca) literature: 1971-1992. — *Festivus* 24 (Supplement): 1-169.
- SMITH, E.A., 1901. On South African marine shells, with description of new species. — *J. Conch., Lond.* 10: 104-116.
- —, 1903. A list of marine Mollusca from South Africa, forming an appendix to G.B. Sowerby's *Marine Shells of South Africa*. — *Proc. mal. Soc. Lond.* 5: 354-402.
- —, 1904. On a collection of marine shells from Port Alfred, Cape Colony. — *J. Malac.* 11: 21-43.
- SOWERBY, G.B., 1892. *Marine shells of South Africa. A catalogue of all the known species with references to figures in various works, descriptions of new species, and figures of such as are new, little known, or hitherto unfigured: 1-89.* London.
- —, 1897. *Appendix to Marine Shells of South Africa: A catalogue of all the known species with references to figures in various works, descriptions of new species, and figures of such as are new, little known, or hitherto unfigured: 1-42,* London.
- —, 1901. On seven new species of marine Mollusca collected by Dr. H. Becker at "The Kowie", South Africa. — *Proc. mal. Soc. Lond.* 4: 213-215.
- TOMLIN, J.R. LE B., 1938. W.H. Turton (1856-1938). — *J. Conch., London* 21: 66-68.
- TURNER, R.D., 1956. The Eastern Pacific marine mollusks described by C.B. Adams. — *Occ. Pap. Moll.* 2: 21-136.
- TURTON, W.H., 1932. *The marine shells of Port Alfred, S. Africa: 1-331.* Oxford.
- —, 1933a. *The marine shells of Port Alfred, South Africa: Errata, 1 p.* Oxford.
- —, 1933b. *Marine shells of Port Alfred, S. Africa.* — *J. Conch., London* 19: 370-371.
- VERRILL, A.E., & K.J. BUSH, 1900. Additions to the marine Mollusca of the Bermudas. — *Trans. Conn. Acad. arts Sci.* 10: 513-544.
- WOOD, S.V., & F.W. HARMER, 1872. Supplement to the *Crag Mollusca*, comprising the Testacea from the Upper Tertiaries of the east of England. — *Palaeontogr. Soc. Monogr.* 12. Suppl. 3: I-XXXI, 1-94.