Table 1

CHARACTERS -	OF THE	STIDEAMITTEE	OF THE	TUDDIDAR

	Radular teeth				Earliest api-	Columellar	Parietal	Position of
Subfamily	Central	Lateral	Marginal	Operculum	cal whorls	folds	callus	sinus
Pseudomelatominae	Large	None	Solid	Present	Smooth	None	None	Shoulder
Clavinae	Vestigial	Broad, comblike	Solid	Present	Smooth or carinate	None	Present	Shoulder
Turrinae	Large, vestigial, or absent	None	Solid, wishbone	Present	Smooth	None	None	Periphery
Turriculinae	Large, vestigial, or absent	None	Solid, wishbone or duplex	Present	Smooth	None	None	Shoulder
Crassispirinae	Rarely present	None	Solid, duplex	Present	Smooth or weakly carinate	None	Present	Shoulder
Strictispirinae	None	None	Solid	Present	Smooth	None	Present	Shoulder
Zonulispirinae	None	None	Hollow, mostly barbed	Present	Smooth	None	Present	Shoulder
Borsoniinae	None	None	Hollow, rarely barbed	Either present or absent	Smooth	Either present or absent	None	Shoulder
Mitrolumninae	None	None	Hollow, no barbs	None	Smooth	Present	None	Suture, shallow
Clathurellinae	None	None	Hollow, no barbs	None	Usually carinate	None	Present	Shoulder
Mangeliinae	None	None	Hollow, rarely barbed	None	Smooth, sub- carinate, or cancellate		Either present or absent	Shoulder
Daphnellinae	None	None	Hollow, no barbs	None	Usually diagonally reticulate	None	Either present or absent	Suture

Daphnelline radulae are illustrated in Figures 136 to 142.

#### Truncadaphne McLean, gen. nov.

Type Species: "Philbertia" stonei Hertlein & Strong, 1939.

Diagnosis: Shell small (to 4 mm in length), sturdy, sculptured with thick axial ribs, overridden by narrow spiral cords that are beaded at intersections; suture bordered by a narrow subsutural cord, shoulder concave below. Protoconch darker than the rest of the shell, of 3 bulbous whorls, the first spirally lirate, the second and third diagonally reticulate. Sinus deep, subtubular, laterally directed, bordered on the inside by projecting parietal callus. Lip edge moderately thick, preceded by a stronger than normal axial rib; lip lirate within, corresponding to the spiral cording. Anterior canal truncate, twisted to the left, columella smooth.

**Discussion:** Truncadaphne resembles Pseudodaphnella Boettger, 1895, and Kermia Oliver, 1915, in having similar clathrate sculpture and parietal callus bordering the sinus, but differs from both in having a diagonally cancellate, rather than axially ribbed protoconch.

Truncadaphne is monotypic. The type species was described as a Pleistocene fossil from San Salvador Island, Galápagos Islands. Recently dead specimens are reported here for the first time from Duncan and Isabela Islands, Galápagos Islands, 35–60 fathoms. Truncadaphne stonei was described originally as having a smooth nucleus and lacking lip denticles, omissions attributed to the poor preservation and immaturity of the type specimen.

#### Microdaphne McLean, gen. nov.

Type Species: Philbertia trichodes Dall, 1910 (=Pleurotoma hirsutum DeFolin, 1867, not Bellardi, 1847).

Diagnosis: Shell small (to 4 mm in length), thin, but strengthened by narrow, raised axial ribs and spiral cords

that are spinose at intersections. Protoconch of 4 relatively large, dark whorls, the first spirally lirate, the rest with slanting axial folds. Sinus sutural, deep, not bordered by parietal callus. Lip preceded by a massive final varix; lip infolded, obstructing the aperture to a narrow opening; lip strongly lirate within, corresponding to the external grooves. Anterior canal moderately elongate, pillar slanted to the left, columella smooth within. Operculum wanting.

Discussion: Characteristic features of *Microdaphne* are small size, spinose sculpture, narrow aperture, and the axially ribbed protoconch. It is essentially unlike any other daphnelline genus. *Raphitoma* Bellardi, 1848, has spinose sculpture, but is larger, has a broader aperture, and an inrolled, spirally malleate protoconch. *Microdaphne* may perhaps be closer to *Veprecula* Melvill, 1917, which has a similar protoconch, tendency toward spinose sculpture, and similarly twisted canal, but a broad aperture and unthickened lip.

Microdaphne is monotypic. Microdaphne trichodes is common on offshore gravel bottoms from the Gulf of California to Colombia and the Galápagos Islands. It has also been illustrated by MAES (1967: plt. 16, fig. B, as "Daphnellinae sp.") from Cocos-Keeling Atoll in the Indian Ocean, suggesting that it is widely distributed in the Indo-Pacific.

#### Literature Cited

Berry, Samuel Stillman

1968. Notices of new eastern Pacific Mollusca. - VII. Leaflets in Malacology 1 (25): 155 - 158 (26 Sept. 1968) CERNOHORSKY, WALTER OLIVER

1970. Systematics of the families Mitridae and Volutomitridae (Mollusca: Gastropoda). Bull. Auckland. Inst. & Mus. no. 8: iv+190 pp.; 18 plts.; 222 text figs. (1 Oct. 1970)

EMERSON, WILLIAM KEITH & ANTHONY D'ATTILIO
1969. Two new species of Galapagan turrid gastropods. The
Veliger 12 (2): 149-156; plts. 28, 29; 5 text figs.

(1 October 1969)

HABE, TADASHIGE & SADAO KOSUGE

1966. New genera and species of the tropical and subtropical Pacific molluscs. Venus (Japan. Journ. Malacol.) 24 (4): 312 - 341; plt. 29 (May 1966)

KEEN, A. MYRA

1958. Sea shells of tropical West America; marine mollusks from Lower California to Colombia. i-xi + 624 pp.; illus. Stanford, Calif. (Stanford Univ. Press) (5 December 1958)

1971. Sea shells of tropical West America; marine mollusks from Baja California to Peru. Second ed.; in press. Stanford, Calif. (Stanford Univ. Press)

Maes, Virginia Orr

1967. The littoral marine mollusks of Cocos-Keeling Islands (Indian Ocean). Proc. Acad. Nat. Sci. Philadelphia 119 (4): 93 - 217; plts. 1 - 26; 4 text figs. (6 Sept. 1967)

1971. Evolution of the toxoglossate radula and methods of envenomation. Ann. Rept. Amer. Malacol. Union for 1970: 69 - 72 (18 February 1971)

McLean, James Hamilton & Leroy H. Poorman

1971. New species of tropical eastern Pacific Turridae. The Veliger 14 (1) 89 - 113; 2 plts. (1 July 1971)

Morrison, Joseph Paul Eldred

1966. On the families of Turridae. Ann. Rept. Amer. Malacol. Union for 1965: 1, 2

Powell, Arthur William Baden

1942. The New Zealand Recent and fossil Mollusca of the family Turridae, with general notes on turrid nomenclature and systematics. Bull. Auckland Inst. & Mus., no. 2: 188 pp.; 14 plts.; text figs. (15 July 1942)

1964. The family Turridae in the Indo-Pacific. Part 1. The subfamily Turrinae. Indo-Pacific Mollusca 1 (5): 227 to 346; plts. 172 - 262 (31 March 1964)

1966. The molluscan families Speightiidae and Turridae.Bull. Auckland Inst. & Mus., No. 5: 184 pp.; 23 plts.

(2 November 1966)

1967. The family Turridae in the Indo-Pacific. Part 1a. The subfamily Turrinae concluded. Indo-Pacific Mollusca 1 (7): 409-444; plts. 298-317 (15 May 1967)

1969. The family Turridae in the Indo-Pacific. Part 2. The subfamily Turriculinae. Indo-Pacific Mollusca 2 (10): 207 - 416; plts. 188 - 324 (9 September 1969)

SHASKY, DONALD R.

1971. Ten new species of tropical eastern Pacific Turridae.

The Veliger 14 (1): 67 - 72; 1 plt. (1 July 1971)

Shuto, Tsugio

1969. Neogene gastropods from Panay Island, the Philippines.
Mem. Fac. Sci., Kyushu Univ., Ser. D, Geology 19 (1): 1-250;
plts. 1 - 24; 43 text figs. (25 January 1969)

THIELE, JOHANNES

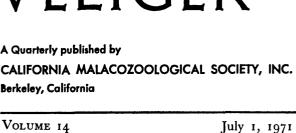
1929 [-1931]. Handbuch der systematischen Weichtierkunde.
 Jena, Gustav Fischer, 1929 - 1935; 1154 pp.; 893 text figs. (pp. 1 - 376 publ. in 1929)

WOODRING, WENDELL PHILLIPS

1928. Miocene mollusks from Bowden, Jamaica: Part II: Gastropods and discussion of results. Carnegie Inst. Washington, publ. no. 385. pp. i - vii + 1 - 564; plts. 1 - 40; 3 text figs. (28 November 1928)

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Note: The various taxa above species are indicated by the use of different type styles as shown by the following examples, and by increasing indentation.

ORDER, Suborder, DIVISION, Subdivision, SECTION, SUPERFAMILY, FAMILY, Subfamily, Genus, (Subgenus)

New Taxa

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