The Nautilus.
Melbourne, Fla., etc., American Malacologists, inc., etc.
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Mesodon verus may be readily distinguished from all other members of the subgenus Insectarius by the complete absence of teeth on the peristome. It bears a strong resemblance to Mesodon subpolliatus (Pilsbry) from which it may be distinguished by the difference in color, the prominent crest behind the lip, the strongly concave outer lip, and the longer and lower parietal tooth.

VARIATION IN THE OLIVE SHELLS OF TROPICAL WEST AMERICA

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In nearly every family of univalve mollusks, certain species show considerable variation in color, size and shape. In the olive shell family there are a number of variable forms found on the West Coast from Mexico to Chile. One species in particular, Olive spicata Röding, is so variable that twenty-eight different names have been applied to it and its nine varieties. No two authorities have agreed on the nomenclature for these forms. Consequently, students and collectors have long been confused as to the proper scientific names to use for them.

It is the hope of the writer that this paper will be helpful in the identification of the above-mentioned variable species. In addition, the variation in other olive shells of the tropical West Coast will be discussed.

1. Olivospicata spicata Röding. Typical O. spicata is a common species, 2½ inches in length, ranging from West Mexico to Panama Bay. The typical form is found in the same regions as many of its color varieties. The shell is elongate with a moderate spire. The color of the aperture is white. Externally, the ground color is light gray or light yellow, shaded with a loose network of brown, pink-gray or blackish markings. The net-
work in some individuals is broken up into spots. The suturel fasciculations are elongate and dark in color. The synonyms are: *melchersi* Menke; *oriola* Duclos, *araneosa* Lam.; *oblonga* Marrat, *interincta* Carpenter; *arachnoidea* Röding. The varieties are as follows:

a. *Oliva spicata violacea* Marrat resembles the typical form in all respects except that in this the aperture is violet in color.

b. *Oliva spicata pindarina* Duclos is like typical *spicata* in markings, but has spire more produced and is more angled at the periphery.

c. *Oliva spicata fuscata* Marrat has the color pattern nearly obliterated by reddish-brown. *O. perfecta* Johnson is a synonym.

d. *Oliva spicata cumingi* Reeve. In this variety, the network markings are not present. The shell is cream-colored with several wide, brown bands circling the body-whorl.

e. *Oliva spicata hemphilli* Johnson. In this nearly white form, only traces of the color pattern are present.

The following varieties are short and thick with short spires and short, dark fasciculations below the sutures:

f. *Oliva spicata venulata* Lamarck. This variety is the most common form of *spicata*, and is called the “Netted Olive” because of its network pattern of black zigzag lines over a ground color of either yellow or gray or olive. Lamarck described a decorticated or worn specimen of his *venulata* as a distinct species, *Oliva harpularia*, which is illustrated in Reeve’s monograph on the olives. *Oliva punctata* Marrat is also a synonym of *venulata*.

g. *Oliva spicata polpasta* Duclos is quite similar to *venulata* but more slender and lighter in color. The network pattern is more or less broken up into dark spots. Occasionally two wide, cream-colored bands encircle the body-whorl.

h. *Oliva spicata subangulata* Philippi has a characteristic angular shoulder on the body-whorl. It might be mistaken for a small *Oliva angulata* Humphrey. However, the young of the latter, when they are the same size as the full-grown *subangulata*, do not have a well-developed shoulder angle. The network pattern of dark lines is speckled with black, triangular spots arranged in interrupted lines.
1. *Oliva spicata obesina* Duclos. This variety is bulbous with a swollen body-whorl. The ground color is gray or milky white. Instead of a network, dark spots are well scattered over the surface.

2. *Oliva juliettiae* Duclos. Formerly considered a variety of *venulata*, this species has a characteristic thick lip and a vivid green ground color, overlaid by a pattern of dark arrow-shaped spots arranged in longitudinal rows. Synonyms are *Oliva poreea* Marrat; *O. mariae* Duclos; *O. graphica* Marrat; *O. timoria* and *O. timorensis* Duclos.

3. *Oliva incrassata* Humphrey, the Angled Olive, is not angled at the shoulder in the juvenile state. Young shells resemble *Oliva spicata venulata* in their markings, but can be distinguished from the latter by the pink tinge of the lip and columella. Adult shells usually have a ground color of creamy-white or light yellow, overlaid by brown spots and several longitudinal rows of black blotches.

Two interesting color varieties occur at San Felipe, W. Mexico, at the northern end of the Gulf of California. One unnamed variety is orange in color and devoid of markings. The other, *Oliva incrassata nivea* Pilsbry, is white. The type was described from a shell with a slight trace of dark. Recently, however, an entirely white specimen was collected alive at San Felipe by Mrs. Milton Zim of the Pacific Shell Club, Los Angeles.

In the literature, the Angled Olive is frequently referred to as *Oliva angulata* Lamarck.

4. *Oliva peruviana* Lamarck is restricted to the west coasts of Chile and Peru. Five varieties have been described.

a. *Oliva peruviana livida* Johnson is creamy-white in color.

b. *Oliva peruviana subcastanea* Vanatta is light brown.

c. *Oliva peruviana castanea* Johnson is dark brown.

d. *Oliva peruviana fulgurata* Martens is streaked longitudinally with lightning-like brown stripes on a cream-colored background.

e. *Oliva peruviana conformis* Philippi has a reduced spire, with swollen body-whorl and angled shoulder.
The typical *peruviana* is covered with brown spots on a light background.

5. **Olivella undatella** Lamarck varies in color and in the pattern of its markings. Some shells are nearly white, others are almost entirely brown. Most of them are patterned with zigzag, longitudinal brown stripes on the body-whorl, often arranged in two broad bands around the shell. Another pattern shows large, dark, triangular flames on a light background. *Olivella nedulina* Duclos is a synonym.

6. **Olivella volutella** Lamarck is usually unicolor and may be yellowish or blue-gray or brown. A variety *Olivella volutella zonalis* Lamarck is white with several wide, brown revolving bands, two on the body-whorl and one on the spire. *Olivella rasomola* and *O. selasia* of Duclos are synonyms of the typical form, while *Olivella zanoeta* Duclos represents the variety *zonalis*.

7. **Agaronia testacea** Lamarck. Ground color varies from light-gray to brown, often with a bluish-east. Frequently marked with zigzag longitudinal brown streaks.

The other members of the olive family on the tropical West Coast show but little variation in shape or color. They are the following species: *Oliva porphyria* L., *Oliva kaleontina* Duclos, *Oliva spledidula* Sby. *Olivella columellaris* Sby., *Olivella dama* Mawe, *Olivella gracilis* Brod. & Sby., *Olivella inconspicua* C. B. Adams (O. myriadina Duclos), *Olivella tergina* Duclos, *Olivella versicolor* Marrat, *Olivella petiolita* Duclos, *Olivella anazora* Duclos. Of this group, *Oliva kaleontina*, *Olivella inconspicua*, *O. versicolor* and *O. petiolita* are rather uncommon.

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**TWENTIETH ANNUAL MEETING, AMERICAN MALACOLOGICAL UNION**

**By MARGARET C. TESKEY, Secretary**

The second-largest crowd in A.M.U. history assembled in Durham, New Hampshire on August 16th, 1954 as guests of Dr. George M. Moore and the University of New Hampshire.