

Zeitschrift: Mitteilungen der Naturforschenden Gesellschaft in Bern
Herausgeber: Naturforschende Gesellschaft in Bern
Band: 25 (1968)

Artikel: Remarks on colour patterns and related features of the Molluscan shells
Autor: Oberling, J.J.
Kapitel: II: Terminology
DOI: <https://doi.org/10.5169/seals-319553>

Nutzungsbedingungen

Die ETH-Bibliothek ist die Anbieterin der digitalisierten Zeitschriften. Sie besitzt keine Urheberrechte an den Zeitschriften und ist nicht verantwortlich für deren Inhalte. Die Rechte liegen in der Regel bei den Herausgebern beziehungsweise den externen Rechteinhabern. [Siehe Rechtliche Hinweise.](#)

Conditions d'utilisation

L'ETH Library est le fournisseur des revues numérisées. Elle ne détient aucun droit d'auteur sur les revues et n'est pas responsable de leur contenu. En règle générale, les droits sont détenus par les éditeurs ou les détenteurs de droits externes. [Voir Informations légales.](#)

Terms of use

The ETH Library is the provider of the digitised journals. It does not own any copyrights to the journals and is not responsible for their content. The rights usually lie with the publishers or the external rights holders. [See Legal notice.](#)

Download PDF: 02.04.2025

ETH-Bibliothek Zürich, E-Periodica, <https://www.e-periodica.ch>

II. Terminology

In the present work, which though it necessarily emphasizes the Gastropoda ⁴, nevertheless includes examples from all three main classes of Mollusks, a unified terminology has been adopted for similar features in all the shells of that Phylum. The *radial* direction will denote a line traced from the summit of the cone of the Archetype Mollusk (or of *Patella*, or *Pecten*) to the margin of its shell (= radial direction in Pelecypods, spiral in Gastropods). The *concentric* «direction» is parallel to the growth lines. The *transverse* direction will as in Cox (1955) refer to a direction that is almost but not quite entirely concentric. — In many Gastropoda the colour pattern may be divided vertically into three zones: A. A *superior zone* above the shoulder, where the latter exists, or above where the shoulder would presumably be, if it does not exist, B. A *central zone*, covering the major part of the whorl, C. A *inferior zone* down from the fasciole. In some cases a thin zone (subsutural) may become differentiated at the very top of the whorl, below the suture. The portion of the whorl hidden by the succeeding whorl is referred to as *base of the whorl*, as in DAVIES (1935), that not hidden as the *side of the whorl*. — The terms «*distal*» and «*proximal*» are used as in BOEGGILD (1930) to denote respectively the direction away from or towards the apex of the shell. — *Light spots*, or *ocelli*, are here defined as colourless or light-coloured spots set in a darker ground: thus the ocellated pattern of *Nitidella ocellata* Gm. (see also Pl. III, fig. 7 b).

III. Presumed activities of sources of secretion ⁵ (as deduced from the secreted patterns)

If we omit the Cypraeidae and assorted families, where the secretion organization is complex (it appears that most of the mantle surface is involved), and in any case where the resulting patterns have been studied in some detail (see ROBERTS, 1851), we may say that in general ⁶ the external coloration of all Mollusks is produced from the mantle edge, and indeed for most purposes may be considered as

⁴ Only one family among the other Mollusca studied, the Veneridae of the Pelecypods, shows any great variety and complexity of colour pattern on its shells.

⁵ «Source of secretion» (i. e., of colour secretion, it alone being considered in this work, unless otherwise indicated) is used for want of a better term. It does not imply any particular group of cells, only the locus or region whence the secretion comes; thus the expression «sources of secretion ambulatory» does not prejudice on what actually happens (whether the cells actually move or whether secretion shifts from one group of cells to the other — the more likely possibility).

⁶ In general, but by no means always! In *Tellina radiata* L. for ex., the «rays» are produced well within the edge of the shell, and the yellow colouring only within the pallial line. The rays are brighter near the apex only because the shell is thinner there. In number of species (for ex. in Olividae such as *O. ispidula* L., in *Lioconcha castrensis* var., etc.), the