



EXPLANATION OF FIGURES

- 1 : adolescent stage 20.8 mm. excl. C.
2 : postlarval stage near metamorphosis 18.3 mm. excl. C.
3 : postlarva 9.7 mm. excl. C.

DIAGNOSIS — Body fusiform and somewhat compressed, rather slender. Maximal height of body to total length (excl. C.) $1 : 5 \frac{1}{3} - 5 \frac{2}{5}$; length of head to total length (excl. C.) $1 : 3 \frac{3}{5} - 3 \frac{3}{4}$; diameter of eye to length of head about $1 : 3$. Pre-anal length 61-66 % of total length excl. C. The eye is somewhat telescopic and mostly pronounced in the adolescent stage, less, or nearly not at all, in older stages. Origin of dorsal fin a little in advance of that of anal, which commences below the middle or posterior part. D : 13-15; A : 14-16; P : 9-10; V : 7. Number of vertebrae 40-41. The number of gill-rakers on the first branchial arch is generally $4 + 9 + 5$.

Maximal length attained about 43 mm. excl. C.

Photophores — Two organs in the region of the eye : $1 + 2$ on the operculum. Eight photophores on the branchiostegal membrane, but no organs at the symphysis of the mandibles. Two series of photophores on each side of abdomen. Lower series consisting of 23 organs ($7 + 16$) on the isthmus and abdomen to the ventral fin and 7-9 organs from ventral to origin of anal. In the upper series there are 21-23 ($12-14 + 8-10$) photophores. Length of row of photophores from origin of anal to base of caudal ($12-14$ organs) is longer than the length of the head.

Postlarval stages — At the base of the caudal is a melanophore, almost equidistant from the dorsal and ventral side. The distance from anterior margin of anal fin to base of caudal fin is relatively greater than in *Vinciguerria poweriae* (Mediterranean material). The photophores are formed prior to metamorphosis, and nearly all are pigmented simultaneously. Total length of metamorphosis stage : 15-17 mm. without caudal.

DISTRIBUTION — *Horizontal* : This pelagic species has been found throughout the whole of the Mediterranean, in the Bay of Cadiz and in the North Atlantic. The northern limit of occurrence in the Atlantic lies about 45° N. Lat.

Vertical : Adolescent and adult specimens especially in depths from about 100 to 600 metres, postlarval stages in the upper 300 metres, and metamorphosis stages in depths of at least 500-600 metres (ontogenetic migration).

Propagation — In the Mediterranean the species spawns preferably in the spring and some way on into the summer. Maturity is attained by this species in the Mediterranean at a length of about 30 mm. excl. C.

SYNONYMY

Maurolicus attenuatus Cocco 1838, *Scopelus tenorei* Cuvier and Valenciennes 1849, *Vinciguerria lucetia* (part) Brauer 1906, *Vinciguerria lucetia* Zugmayer 1911.

LITERATURE

1838. — COCCO, Su di alcuni Salmonidi del mare di Messina. *Nuov. Ann. Sci. Nat. Bologna* II; p. 193.
1849. — CUVIER et VALENCIENNES, Histoire naturelle des Poissons XXII; p. 441.
1906. — BRAUER, Die Tiefsee-Fische. *Wiss. Ergebn. Deutsch. Tiefsee-Expedition "Valdivia"* XV; p. 97.
1911. — ZUGMAYER, Poissons. *Résult. Camp. Sci. Monaco* XXXV; p. 56, pl. II, fig. 4.
1919. — JESPERSEN and TĀNING, Some Mediterranean and Atlantic Sternoptychidæ. *Vid. Medd. Dansk Naturh. Foren.* LXX; p. 218, pl. XVII, figs 3 and 6.
1926. — JESPERSEN and TĀNING, Mediterranean Sternoptychidæ. *Rep. Danish Ocean. Expedit. 1908-10* II, A. 12; p. 22, figs.

P. JESPERSEN 1934.