A NOTE ON THE DEFORMITY IN POMFRET, *STROMATEUS CINEREUS* (BLOCH)

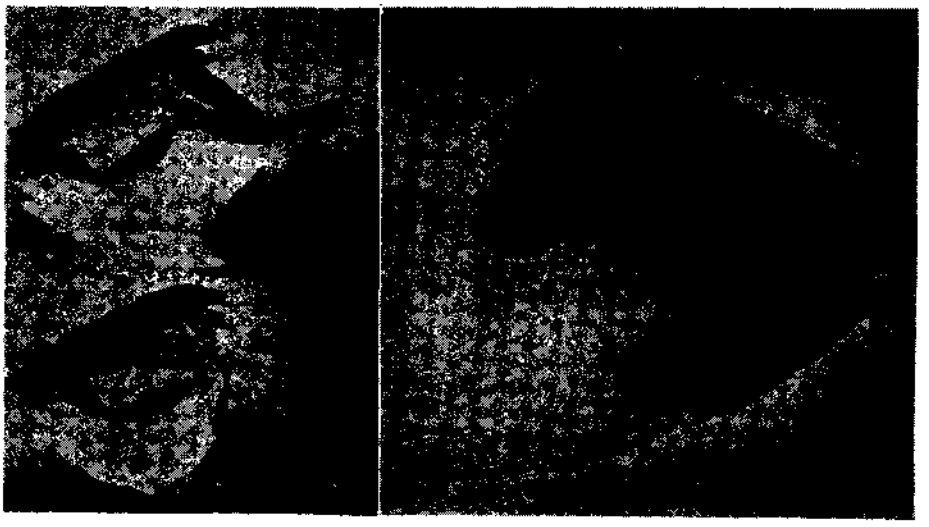
DURING observations of fish brought to Varanasi fish market in October 1961, the author came across an abnormal specimen of a pomfret, *Stromateus cinereus* (Bloch) which is described in the present note. Many workers like Stoddart (1936), Otto (1841), Couch (1865), Day (1880-84), Peach (1871), Traquair (1882, 1892), Grosser & Prizbram (1906), Fiebiger (1907), Williamson (1911), Gamill (1912), Chabnaud (1949), Forest (1950), Kapoor and Sarkar (1955) and Sarkar and Kapoor (1956) have described deformities in various fishes, but so far none has reported on deformity in *S. cinereus*.

The total length of the abnormal *S. cinereus* was 80 mm. and length of head 27 mm., which was contained 2.96 times in the total length as compared to 4-4½ times in a normal specimen. All fins namely dorsal, anal and caudal appeared to be confluent and the total number of combined fin-rays were 78 in contrast to the normal specimens in which the dorsal has 44-49, anal, 39-47 and caudal 19 (Total 102-115). The amputation appears to have taken place slightly above the caudal peduncle which on healing became membranous. The injury which most probably occurred in the early stages of development had retarded the normal growth of dorsal and anal fins in the area of the caudal peduncle and gave it a wrinkled appearance. Due to this, the caudal fin-rays appear to be a part of dorsal and anal fins. The membranous portion compensated the loss of the caudal fin and helped the fish in keeping its balance in water. It was so well compensated that the fish did not suffer any retardation in the growth of other parts of the body and its normal functioning was apparently not hampered. (Fig. 1.)

A comparison of the vertebral column of the deformed specimen was made with that of a normal specimen by X-Ray examination to study the exact location of deformity as also the effect of injury on the skeleton. A normal specimen of *S. cinereus* has 37 vertebrae (15 trunk and 22 caudal) in the vertebral column which runs almost straight with slight elevation in the trunk region and a slight depres-

sion in the caudal region. Last three caudal vertebrae go to support the caudal fin rays. In the case of the abnormal specimen there were only 22 vertebrae (15 trunk and 7 caudal) and 15 caudal vertebrae had got removed due to injury. The last caudal vertebra however, supported 8 caudal fin-rays, which appear to have been secondarily acquired. The vertebral column became a bit more concave in this region. Individual vertebra had also become transversely flattened but there was no fusion of vertebrae. The skeletal differences between the normal and deformed specimen are tabulated below :

Particulars	Normal specimen	Deformed specimen
1. Total No. of vertebrae	37 (15 trunk + 22 caudal).	22 (15 trunk + 7 caudal).
2. Shape of vertebral column	Almost straight with slight elevation in trunk and slight depression in caudal region.	A bit more curved in *S* shape.
3. Shape of vertebra	Elongated.	Transversely flattened.
4. Condition of haemal spine	Thin and narrow.	Thick and flattened.
5. Caudal fin and its support	Caudal fin-rays supported by last three caudal vertebrae.	Caudal fin-rays secondarily acquired and supported by the last caudal vertebra.



FIGS. 1 & 2. Showing deformities in *Stromateus cinereus*.

From the foregoing description it is apparent that the injury had its effect on the normal development of the vertebral column and its component parts but had no material effect on the general growth of the fish. Gemill (1912), Sarkar and Kapoor (1956) observed that the deformities are caused by mechanical injury in

early stages of development. Sarkar and Kapoor categorised the deformities of caudal region in two groups viz. (1) fishes in which caudal peduncle and complete fin or a portion of the fin are absent ; (2) fishes in which caudal peduncle and fin are present. The specimen described in the present communication falls in the first category.

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