

in a host. No traces of damage to the varied from 29-55 mm (antero-posterior parts of the body were observed. Size of host axis).

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ON A NEW RECORD OF CUVIER'S BEAKED WHALE *ZIPHIUS CARVIROSTRIS* FROM THE INDIAN WATERS

ABSTRACT

The Cuvier's beaked whale *Ziphius cavirostris* Cuvier, 1823 is a rare species mostly leading a solitary life, but is said to be cosmopolitan in distribution. However, this species has been hitherto never recorded from the Indian Ocean from an area ranging from the east coast of South Africa to Tasmania. In view of this topical interest a few notes of a male specimen of this species stranded on the reef flat of Minicoy are provided here.

THERE are many records of stranding of different species of whales from the mainland and adjacent coasts of Indian subcontinent in the past and are mainly documented by several authors (James and Soundararajan, 1979). However, there appears to be no mention of the occurrence of Cuvier's beaked whale *Ziphius cavirostris* Cuvier, 1823 (Ziphiidae, Cetacea) from this area. The species is monotypic and is said to enjoy a cosmopolitan distribution, though rare and solitary (Harper and Shipley, 1902). Mitchell and Houck (1967) and later Gaskin (1972) have summarised the available data on distribution of this species as to: South Africa, New Zealand,

Tasmania, off Japan, Midway Island, Hawaii, Aleutian Islands, British waters, France, Spain, west coast of North America, California and Puerto Rico, but not Arctic or Antarctic. From the above it is evident that there is wide gap in the known distribution of this species in the Indian Ocean from 30°S northward including the Red Sea. However, Daugherty (1965) felt that the species "may be much more common than realised because they are solitary and inconspicuous".

During a reconnaissance survey of the leeward reef flat of Minicoy Atoll in Lakshadweep on 10-11-1982 we sighted a stranded

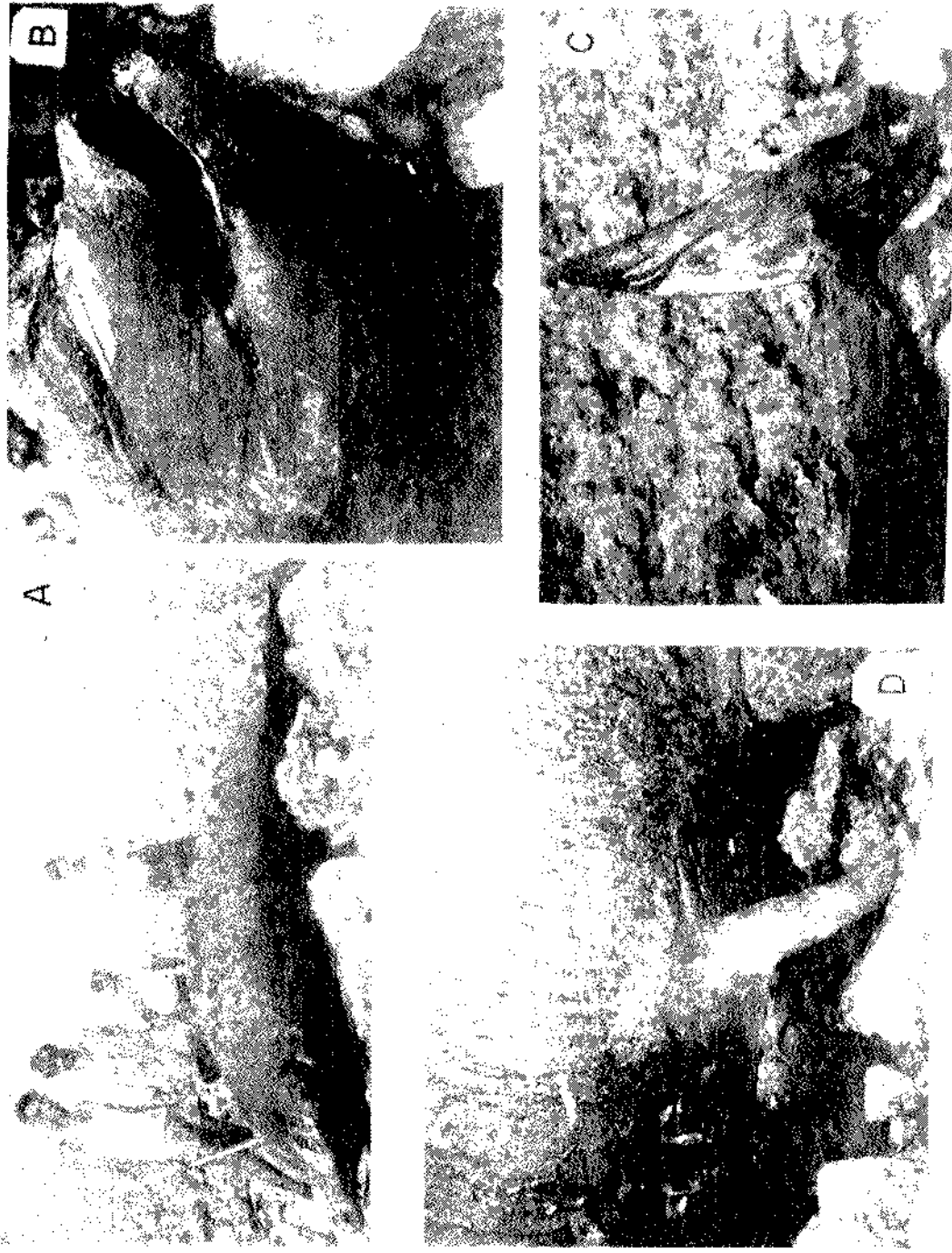


PLATE I. A. *Ziphius cavirostris*. Total length 564 cm. B. Head. Note one of the teeth at the tip of the lower jaw. C. Caudal fluke with a notch at the centre and D. The penis pressed out on the second day of stranding of the dead specimen.

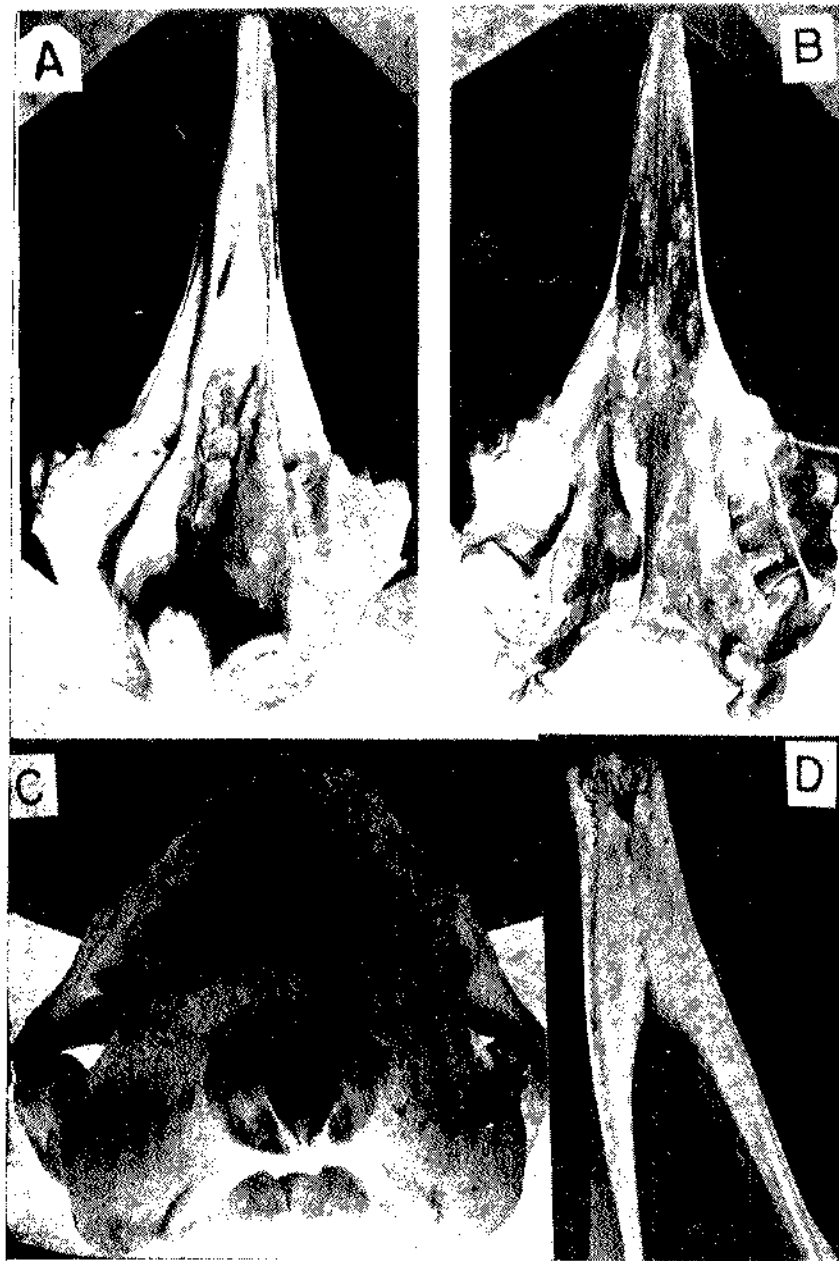


PLATE II. A. Skull of *Z. carpiostris* dorsal view. Total length 95 cm. B. ventral view. C. Skull posterior view showing the Foramen magnum and D. Mandible with sockets of the two teeth at the symphysis.

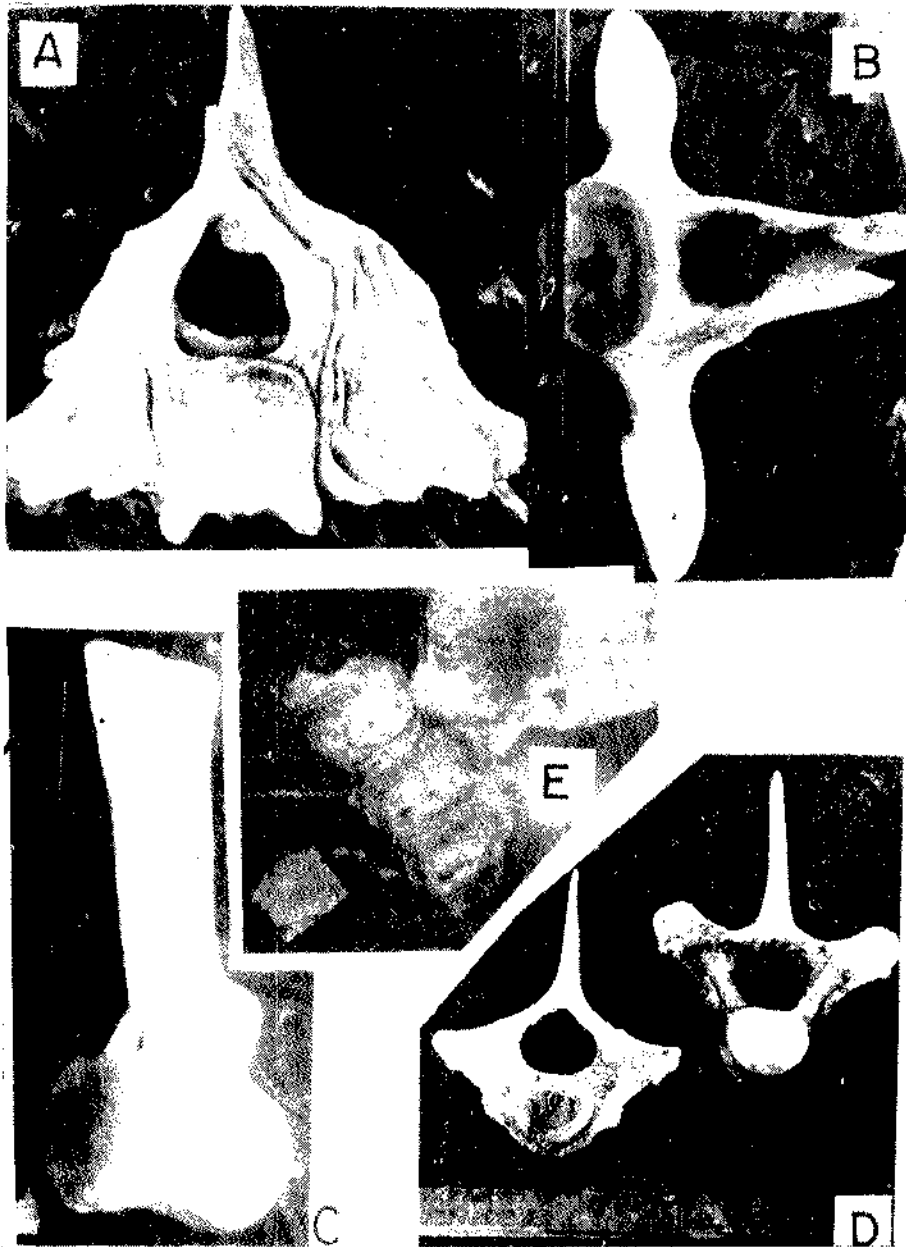


PLATE III A. Fused cervical vertebrae. B. One of the typical lumbar vertebrae, C. one of the anterior caudal vertebrae, D. Thoracic vertebrae and E. Some of the fused last caudal vertebrae with a rectangular Cheveron bone.

whale on the reef flat at Boaz Point (Ragandi) (Plate I A). The animal which was dead, would have stranded on the previous night when high tide occurred and the carcass did not show any sign of putrefaction, though the blubber was oozing slightly.

The various morphometric measurement of this adult male whale are listed in Table 1. The general colour was grayish brown on the upper dorsal half getting lighter below. One of the teeth, out of the two, characteristic of the species was somehow missing at the time of stranding. The teeth were set at the symphysis of the mandibles in sockets (Pl. I B; Pl. II D). The tooth was about 6 cm in

total length when removed and was slightly tapering towards the apex in the form of an elephantine tusk. The beak, as already pointed out by Daugherty (1965) is short and lacks much contrast from the head. Pike and Mac Askie (1968) pointed out that the males of *Z. carvirostris* have a bulged head as is seen in the present specimen. The caudal fluke has a distinct notch (Pl. I C). We visited the carcass on the next day again when sea conditions permitted us to reach the site. By this time the specimen was found oozing more blubber and the penis was found to be extended out though in flacid condition. This was probably due to the pressure of the internal organs and no blood supply was possible to the penis after the death (Pl. I D).

TABLE 1. *Morphometric measurements (in cm)*

Total length from snout to notch of caudal fluke.....	564
Projection of snout (mid point) beyond tip of upper jaw.....	80
Distance from tip of snout to blow hole.....	69
Distance from tip of snout to centre of eye.....	79
Distance from tip of snout to the tip of flipper.....	203
Distance from tip of snout to the anterior insertion of flipper.....	140
Length of flipper.....	93
Distance from tip of snout to the anterior base of penis.....	344
Distance from central notch of fluke to the centre of anus.....	152
Distance from central notch to the posterior base of penis.....	195
Length of flukes (dorsal) on the outer curvature.....	78
Total width of fluke between extremities.....	137
Maximum width of flipper.....	18
Girth of body at the site of anus.....	254
Girth of body at the origin of flipper.....	308
Distance between tip of upper jaw and gape of mouth.....	33
Distance between tip of lower jaw and gape of mouth.....	39
Length of blow hole.....	18
Width of blow hole.....	8
Distance from the anterior base of flipper to the notch of fluke.....	424
Anterio-posterior length of eye.....	6.5
Dorso-ventral diameter of eye.....	4.5
Distance from the angle of mouth to the eye.....	40.5
Distance between anus and penis.....	33
Length of tooth.....	6

The animal was washed to the island shore after two days in a putrified condition. Though we planned to retrieve the skeletal parts for a detailed osteological study, it could not be done since some of local people mutilated the specimen by cutting with axes under the belief that contains Ambergris and large chunk of flesh with skeletal parts was removed to be used as manure for coconut trees. However, some of the major skeletal components such as skull and vertebral column were photographed and presented here.

The family Ziphiidae to which the present species belongs are among the least known Cetaceans. They are in general, characterised by a snout which is frequently drawn out into a rostrum or beak and are typically toothed. A central notch is said to be absent in the caudal fluke (Gaskin, 1972) of the members of this family. However, the different sketches and photographs given by many authors of *Mesoplodon* spp. and *Berardius* spp. both of which belong to Ziphiidae clearly

indicate a notch. The figures of *Ziphius carvirostris* given by both Pike and Mac Askie (1968) and Daugherty (1965) also distinctly show notch at the caudal fluke as is the case in the present specimen. *Ziphius* differs from other members of the family in the possession of only two teeth (rarely two pairs according to Daugherty (1965) in the lower jaw. No tooth is present in the upper jaw. There was no bodily wound on the present specimen at the time of stranding which suggests a natural death. The circumstances by which one of the teeth was missing is also not known. The lower jaw displayed no damage. The species is said to be able to attain a length of 32 feet (9.7 m) which shows that the present specimen is not yet fully grown at the time of death.

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