Classification of Class Mammalia

9 The main taxonomic subdivisions (up to orders) adopted in the present work are based on the monograph on taxonomy written by G.G. Simpson (1945), who made extensive use of paleontological data. It is very similar to the system developed by M. Weber (1928), which, in its time, was well founded on anatomical data of recent forms. The orders acknowledged by Simpson have long been recognized and their grouping as suggested by him into higher groups gives rise to no serious objections.

Of late a tendency has developed for greater fragmentation of orders. It has been proposed that marsupials be divided into three orders (Polyprotodontia, Caenolestoidea, and Diprotodontia), cetaceans into two orders (toothless whales—Mystacoceti, and toothed whales—Odontoceti), primates into three orders (Prosimiae, Simiae, and Tarsioidea), and so on. All these suggestions, however, are as yet not well founded. Moreover, among the morphology and paleontology oriented mammalian systematists such a tendency to extreme division is not acceptable. We believe an order is primarily an integrating and not a differentiating concept. Otherwise the same situation will inevitably arise in mammalogy as has already arisen in ornithological taxonomy wherein the concept of an order has largely lost its meaning; as a result the scientific aspect of vertebrate systematics has suffered greatly.

Only one change has been made in the orders under consideration—pinnipeds are treated as an independent order and not as a suborder of Carnivora. Based on the classification of modern mammals these two groups separate naturally, i.e., they are no less distinctive than some other orders.

Based on already established views Lagomorpha are treated as a separate order (Weber considered them only a suborder of rodents). Thus, instead of the 18 orders of Simpson, 19 are recognized here. Of these, 10 (52.6%) are represented in Soviet fauna and one (Steller's sea cow) is now extinct.

The classification adopted for the class is depicted below. Orders present in the Soviet fauna are asterisked (V.H.).

10 CLASS MAMMALIA

- Subclass PROTOTHERIA — Order MONOTREMATA
- Subclass THERIA
  - Infraclass METATHERIA — Order MARSUPIALIA
  - Infraclass EUTHERIA
    - Cohort UNGUICULATA
      - *Order INSECTIVORA
      - Order DERMOPTERA
      - *Order CHIROPTERA
      - Order PRIMATES
      - Order EDENTATA
      - Order PHOLIDOTA
    - Cohort GLIRES
      - *Order LAGOMORPHA
      - *Order RODENTIA
    - Cohort MUTICA — *Order CETACEA
    - Cohort FERUNGULATA
      - Superorder FERAE
        - *Order CARNIVORA
        - *Order PINNIPEDIA
      - Superorder PROTUNGULATA — Order TUBULIDENTATA
      - Superorder PAENUNGULATA
        - Order PROBOSCIDEA
        - Order HYRACOIDEA
        - *Order SIRENIA
      - Superorder MESAXONIA — *Order PERISSODACTYLA
      - Superorder PARAXONIA — *Order ARTIODACTYLA

11 *Key for identifying Orders of Mammals*

1 (2). Hind limbs absent. Body fishlike with large bilobate caudal fluke set horizontally ..... CETACEA

2 (1). Hind limbs present. Body not fishlike; tail, if present, not in form of bilobate fluke.

3 (4). Forelimbs in form of leathery wings .. CHIROPTERA

4 (3). Forelimbs of different structure.