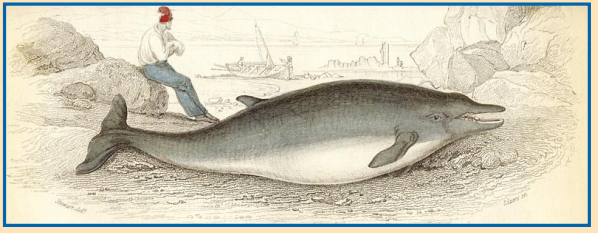
New whale from old bones

In the mid-1970s, four dead beaked whales were washed ashore separately near San Diego, California. As announced in the latest issue of *Marine Mammal Science* (**18,** 577–608; 2002), they have now been recognized as a new species. This is something of an event — as with most large mammals, new species descriptions of cetaceans (whales, dolphins and porpoises) are not an everyday occurrence.

Initially, from an examination of the whales' skulls, James Mead tentatively identified the animals as the Southern Hemisphere species *Mesoplodon hectori*. At that time there were a dozen named species of beaked whale (Ziphiidae) within the genus *Mesoplodon*, diagnosed primarily by the size, shape and position of an enlarged pair of teeth in the adult males. An example of a beaked whale — *M. bidens,* drawn in 1843 — is shown in the picture. The enlarged teeth are used in male–male fights, not for feeding; beaked whales feed by using their tongues in a piston-like manner for sucking in prey, primarily squid.

Merel Dalebout has recently re-examined the remains of the stranded specimens, but this time by analysing DNA-sequence data. She found that data from the California animals clustered far apart from those from *M. hectori*. Dalebout, Mead and colleagues have now formally described the new species, naming it *M. perrini* after William F. Perrin, an eminent contemporary scholar of marine mammals.

The majority of the 85 species of living cetaceans were described from specimens collected during the great voyages of discovery of the eighteenth and nineteenth centuries. Most of those discovered more recently are beaked whales: for example, only 1 out of 34 species of living oceanic dolphins (Delphinidae), but 8 out of 20 beaked whale species, have been described since 1900. The reason is that, as offshore, deep-water creatures,



beaked whales are especially difficult to identify and study.

Dalebout and colleagues' finding is surprising because the Californian coast has long been scoured for stranded specimens, and the offshore waters have been extensively covered during surveys of marine mammal populations. Recognition of a new whale from this region highlights how little we know about biological diversity in the ocean. The discovery also exemplifies the continuing value of specimens collected decades or more ago. To resolve the identity of *M. perrini* with certainty, Dalebout sampled bones of the specimens that had been housed in museum collections almost a quarter of a century previously.

At 3.9 m long, the adult male specimen of *M. perrini* is smaller than the adult female (4.4 m). This is the reverse of the usual case in mammals, but is characteristic of beaked whales. The high number of calves — three of the five known specimens — is also typical for all species of *Mesoplodon* stranded along the Californian coast, perhaps indicating that they migrate to coastal waters for calving. **John E. Heyning**

John E. Heyning is in the Natural History Museum of Los Angeles County, 900 Exposition Boulevard, Los Angeles, California 90007, USA.
e-mail: jheyning@nhm.org