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lingual surface and associated microstriae indicates that the teeth were post-embryonic. The morphology, size, and wear of the teeth and small bone fragments suggest that the teeth were from a neonatal *Talenkauen santacrucensis*. This is the first record of neonatal ornithomimid remains from South America.

The Early Cretaceous Chinese lizard *Yabeinosaurus*: insights from new specimens

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Yabeinosaurus was one of the first tetrapods to be described from the now famous Early Cretaceous Jehol Biota of north-eastern China. However, although it was correctly identified as a lizard its phylogenetic position was misunderstood for decades due to poor preservation, limited access to the material, and the subsequent loss of the holotype during WW2. As the original specimens (and a recently erected neotype) appeared to be weakly ossified, many authors attributed *Yabeinosaurus* to the Gekkota, but the recovery of new specimens from the Yixian and overlying Jiufotang formations (125-120 mya) has changed our perceptions. The type specimens are small with thin bones because they are immature. *Yabeinosaurus* adults were robust and relatively large (~300 mm SVL), probably reaching adult size over several seasons. New phylogenetic analyses place *Yabeinosaurus* and its sister taxon, the near contemporary Japanese *Sakurasaurus*, on the scleroglossan stem.

Importantly, some of the new specimens also provide an insight into the biology of *Yabeinosaurus*. Three preserve vertebrate remains, predominantly fish bones, in the gut. Fish eating is reportedly rare in living lizards, being restricted to the small clade comprising *Shinisaurus*, *Lanthanotus* and *Varanus*, all of which forage in and around freshwater.

High diversity in late Early Cretaceous ichthyosaurs part II: The Cambridge Greensand material

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Recent and on-going work on Canadian and French Cretaceous ichthyosaurs has unveiled a high diversity of Albian ophthalmosaurids, suggesting the extinction of ichthyosaurs which occurs during the Cenomanian was a much more severe event than previously supposed. Yet the ichthyosaur assemblages from other areas such as the USA and Australia are monospecific, suggesting that the diversity of ichthyosaurs was not universally high.

The Cambridge Greensand ichthyosaur material, which has not been the subject of any thorough study since 1869, consists of about 900 specimens, the vast majority of which are isolated bones. Nevertheless, this abundant material offers a good opportunity to assess the diversity of the ichthyosaurs that roamed the western England Sea during the late Albian–Early Cenomanian interval. In order to assess this diversity, diagnostic bones such as basioccipitals, stapes, humeri and femora were compared to that of other ophthalmosaurids. Several morphotypes, some represented by 10+ specimens are recognized. Articulated specimens were used to unite cranial and appendicular bone morphotypes to a taxon. An extremely diverse assemblage of at least 5 distinct taxa is recognized in the Cambridge Greensand Formation: *Platypterygius* sp., two new genera that have representatives in southeastern France and Germany, a *Brachypterygius/Aegirosaurus* morphotype, and the long-forgotten but diagnostic *Cetarthrosaurus walkeri*, for which we found a second and better preserved specimen. The diversity of the 'mid' Cretaceous ichthyosaurs from Europe now matches that of the Early Jurassic, a period sometimes seen as the 'Golden Age' of post-Triassic ichthyosaurs.

Form, function and phylogeny: Virtual reconstruction of the inner ear of plesiosaurs

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Plesiosaurs, are extinct marine diapsids spanning almost 140 million years (Jurassic–Cretaceous). They represent an excellent study group for comparisons of semi-circular canal form and function due to their conspicuous range of body plans, suggesting wide variation in the range of angular motion of the head within Plesiosauria. Nonetheless, the vestibular system of plesiosaurs has not been examined in any detail.

In the present study, 3D reconstructions of semicircular-canals in five distantly-related plesiosaurs were created using Micro-CT scan data. These included two plesiosauromorph taxa