

## LATE OLIGOCENE CETACEA FROM ASHORO-CHO, HOKKAIDO, JAPAN; THE FAUNA AND ITS ECOLOGIC IMPLICATIONS

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The most diverse Late Oligocene fossil cetacean fauna from the western North Pacific margin is known from the Late Oligocene age Morawan Formation, exposed near Ashoro-cho, Hokkaido, Japan. The fossils are from a thick stratigraphic sequence of siltstones and sandstones that have yielded some radiometric dates and also have produced several important desmostylian specimens.

The fossil cetacean assemblage from the Morawan Formation includes 11 species. The Suborder Mysticeti is represented by five primitive toothed mysticetes belonging to the family Aetiocetidae: *Ashorocetus eguchii* Barnes and Kimura, 1995; *Morawanocetus yabukii* Kimura and Barnes, 1995; *Morawanocetus*, new species; *Aetiocetus tomitai* Kimura and Barnes, 1995; and *Aetiocetus polydentatus* Sawamura, 1995. Six species of fossil toothed whales, Suborder Odontoceti, are: a new genus and species of large physeteroid; a new genus and species of large Agorophiidae; a new genus and species having affinities with *Sachalinocetus*; a new genus and species of very aberrant Agorophiidae; a small dolphin-like cetacean of uncertain familial assignment; and a new genus and species of large Kentriodontidae.

The fossil cetacean assemblage from the Morawan Formation is relatively diverse compared to other published cetacean assemblages from elsewhere in the world. The mysticetes are not very diverse, being represented only by toothed aetiocetids. Baleen-bearing mysticetes have been reported from other deposits of the same age, but are notably absent in the Morawan Formation. The odontocetes are more diverse morphologically and taxonomically than are the mysticetes, and their stage of evolution is similar to those from elsewhere of the same age. As elsewhere in the North Pacific, the Family Squalodontidae is notably absent, but is fairly abundant in correlative deposits elsewhere.

Despite the fine-grained nature of the sediments in the Morawan Formation, the deposit was probably laid down in a near-shore environment. The occurrences of desmostylians are consistent with this. This may explain the absence of baleen-bearing mysticetes. The absence of squalodontids is inexplicable, but is consistent with observations elsewhere in the North Pacific realm.