

# Ancient Fish Jaw Found

Dan Bowen

Last summer, while fossil collecting on the Browns River in the Comox Valley, an interesting concretion was cracked open and found to contain the partial jaw of a fish. The collector, who asked to be unnamed, did the correct thing by bringing it directly to the VIPS for identification at the Vancouver Island Paleontological Pavilion at the Driftwood mall (now closed). We realized that the jaw was important and asked the finder if he was agreeable to donate it to the VIPS collection and to pursue the identification of the specimen.

I immediately contacted 5 of the top vertebrate paleontologists that I knew of in North America by email and attached images. There were many different speculations and each paleontologist advised where we might get further information. Finally, Dr. J. D. Stewart, assistant curator of the Vertebrate Paleontology collection at the Natural History Museum of Los Angeles County replied, and after an exchange of photographs and emails, Dr. Stewart suggested that the



Indeterminate fish jaw. Photo by Dan Bowen

best way to identify the jaw was for him to see the real specimen. After discussions with Dr. Rolf Ludvigsen, who knew Dr. Stewart through correspondence during the writing of West Coast Fossils, we agreed to send the specimen off to California for proper examination. Here is Dr. Stewart's reply and tentative evaluation of the jaw:

*"I went in to the museum this morning and opened your package. All is in order; no damage. It is indeed a right maxilla of an ichthyodectiform fish. It is obviously not Gillicus, Prosaurodon, Saurodon, or Saurocephalus. Possibilities still include Ichthyodectes, Xiphactinus, and Cladocylus. The last is unlikely because it seems to be restricted to the lower Cretaceous. From the photos, I had thought that there was an upper and a lower jaw in occlusion. It turns out that the things that look like lower teeth are actually internal molds of some of the empty alveoli of the maxilla. Some information could be gained by exposing the dorsal surface (palatine facet) and the tips of the teeth. Are you open to having one of our preparators make these improvements? Thanks for the opportunity to see the real article.*  
*J. D. Stewart"*

We have since advised Dr. Stewart that he can prepare the specimen to better analyze the elements of the jaw. As further information is gained we will determine the next step for the fossil.

The fossils from the Upper Cretaceous shale of Vancouver Island continue to yield important information about the flora and fauna of that time. Thanks go to the contributions of the many diligent amateurs, who collect for the reward of finding good specimens and the pure love of the science.