= Schinderhannes (genus) =

Schinderhannes bartelsi is an anomalocarid known from one specimen from the lower Devonian Hunsrück Slates . Its discovery was astonishing because previously , anomalocaridids were known only from exceptionally well @-@ preserved fossil beds (Lagerstätten) from the Cambrian , 100 million years earlier .

Anomalocaridids , such as Anomalocaris , were organisms thought to be distantly related to the arthropods . These creatures looked quite unlike any organism living today ? they had segmented exoskeletons , with lateral lobes used for swimming , typically large compound eyes , often set on stalks , and most strikingly , a pair of large , claw @-@ like great appendages that resembled headless shrimp . These appendages are thought to have passed food to the animal 's mouth , which resembled a ring of sliced pineapple .

= = Discovery = =

The single specimen was discovered in the Eschenbach @-@ Bocksberg Quarry in Bundenbach , and is named after the outlaw Schinderhannes who frequented the area . Its specific epithet bartelsi honours Christoph Bartels , a Hunsrück Slate expert . The specimen is now housed in the Naturhistorisches Museum , Mainz .

= = Morphology = =

Schinderhannes is about 10 centimetres (3 @.@ 9 in) long ; like other anomalocaridids , it bears a pair of great appendages (very similar to those of Hurdia) , a radial Peytoia ' pineapple @-@ ring ' mouth , and large , stalked , compound eyes . It has 12 body segments ; large flap @-@ like structures used for swimming protrude from the 11th segment , and from just behind the head .

= = Ecology = =

The preserved contents of its digestive tract are typical of those of other predators ' , and this lifestyle is supported by the raptor @-@ like nature of the spiny great appendages and the size of the eyes . The organism was clearly a competent swimmer , propelling itself with the ' flippers ' attached to its head , and using its wing @-@ like lobes on the 11th segment to steer . These lobes presumably derived from the lateral lobes of Cambrian anomalocaridids , ancestors that used lobes along their sides to swim , and lacked the specializations of Schinderhannes .

= = Significance = =

The organism 's discovery was most significant because of the huge range extension of the anomalocaridids it caused : the group was only previously known from lagerstätten of the lower @-@ to @-@ middle Cambrian , 100 million years before . This underlined the utility of lagerstätten like the Hunsrück Slate : these exceptionally preserved fossil horizons may be the only available opportunity to observe non @-@ mineralised forms .

The organism has also prompted novel hypotheses about the classification of early arthropods . One classification scheme has Schinderhannes classified basally to the crown arthropods , but closer to that group than Anomalocaris . This would mean that the crown arthropod lineage evolved from a paraphyletic grade of anomalocaridids , and that the group of early arthropods with short ' great appendages ' are not a natural grouping . The biramous limb of arthropods may then have arisen through fusion of anomalocaridid lateral lobes and gills .