



Threadfin hawkfish predation on a stalkless crinoid

Crinoids, a type of echinoderm, frequently have absent or regenerated body parts, but direct observations of dismemberment are exceedingly rare in nature, making it difficult to identify potential causes. Nevertheless, research suggests that it is due primarily to predation, which is thought to have played a central role in crinoid ecological and evolutionary history. Ten families of fishes are currently known to prey on crinoids. Here, we introduce a previously undocumented record: the threadfin hawkfish (*Cirrhitichthys aprinus*), which represents the first of its family (*Cirrhitidae*) to be observed feeding on a crinoid.

In the top image, a hawkfish is in the process of consuming a stalkless crinoid (*Capillaster multiradiatus*) on a pink barrel sponge located off the coast of Dauin, The Philippines. The jagged ends of the crinoid's disarticulated arm fragments are indicative of having been bitten off by the fish rather than having undergone autotomy (self-induced amputation), as the latter process, which occurs at specialized articulations called syzygies, produces a smooth break.

Angela Stevenson^{1,2} and Tomasz Baumiller³
¹University of British Columbia, Vancouver, Canada; ²GEOMAR Helmholtz
Centre for Ocean Research Kiel, Kiel, Germany; ³University of Michigan,
Ann Arbor, MI
doi:10.1002/fee.2272



