

Clown Nudibranch - Now We Have Two
by Linda Schroeder and Karin Fletcher, Photos by Karin Fletcher

A recent paper divided our Clown Nudibranch, *Triopha catalinae* (Cooper, 1863), into two species. *T. catalinae* had been considered to be a trans-Pacific species. Now it is considered a strictly eastern Pacific species ranging from southeast Alaska to the northern Gulf of California. *Triopha modesta* Bergh, 1880 has been resurrected as the trans-Pacific species. This one ranges from the Sea of Japan to southern California. There is some genetic grouping between the eastern and western Pacific groups so further study may yet separate them into different species, but as the type locality of *T. modesta* is Alaska, that name should be retained for the eastern Pacific.

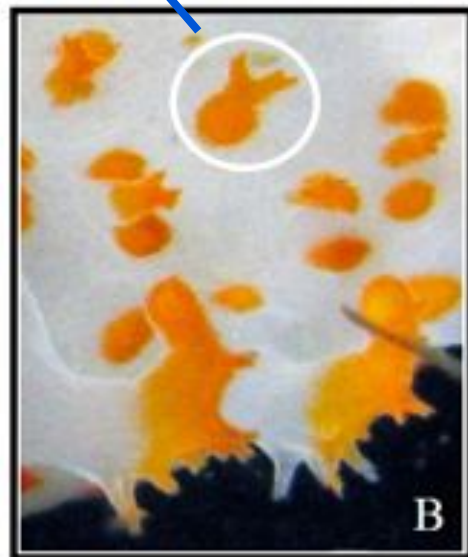
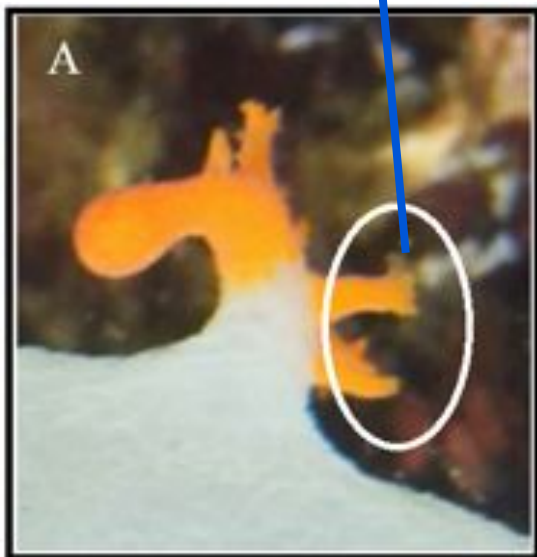
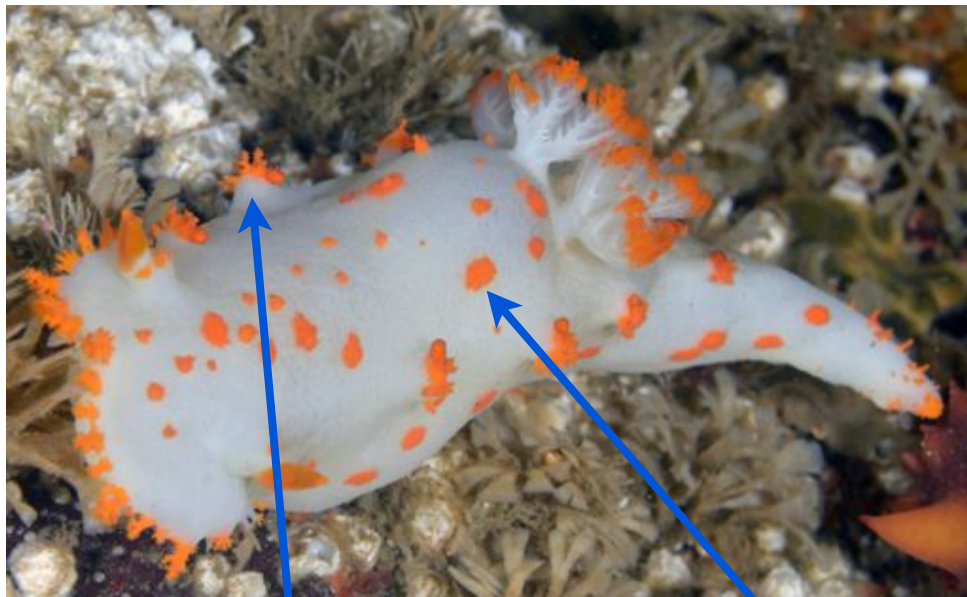
The two species are very similar. Fortunately we don't have to rely on DNA or dissection to separate the species. They can be differentiated by physical characteristics if viewed closely, or through good close-up photos.

Color will not be a good identifier. *T. catalinae* is described as having a translucent white or opaque white body color while *T. modesta* is translucent white or yellowish-white. There is similar overlap in the color of the appendages, tubercles, and rhinophores. Differences in colors can be a matter of interpretation when the differences are subtle.

The specimens used in this study were all of a small to average size so it will require further study to determine if the maximum size of each species is similar or if one grows significantly larger than the other.

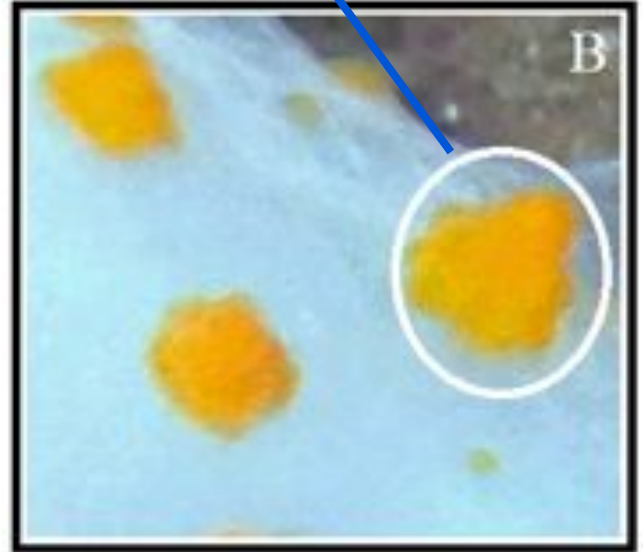
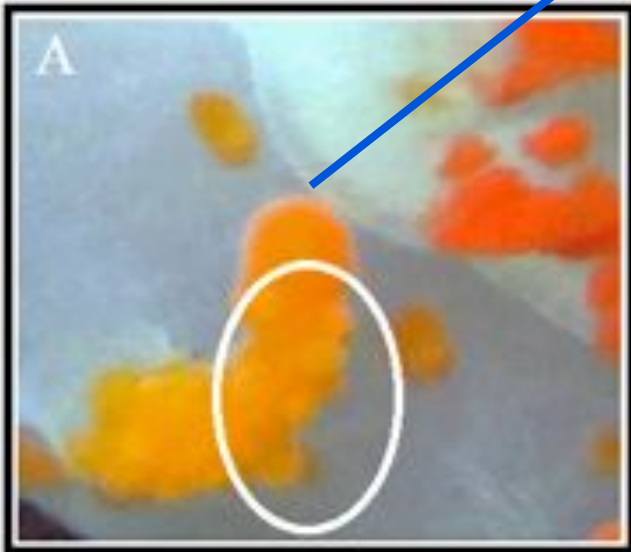
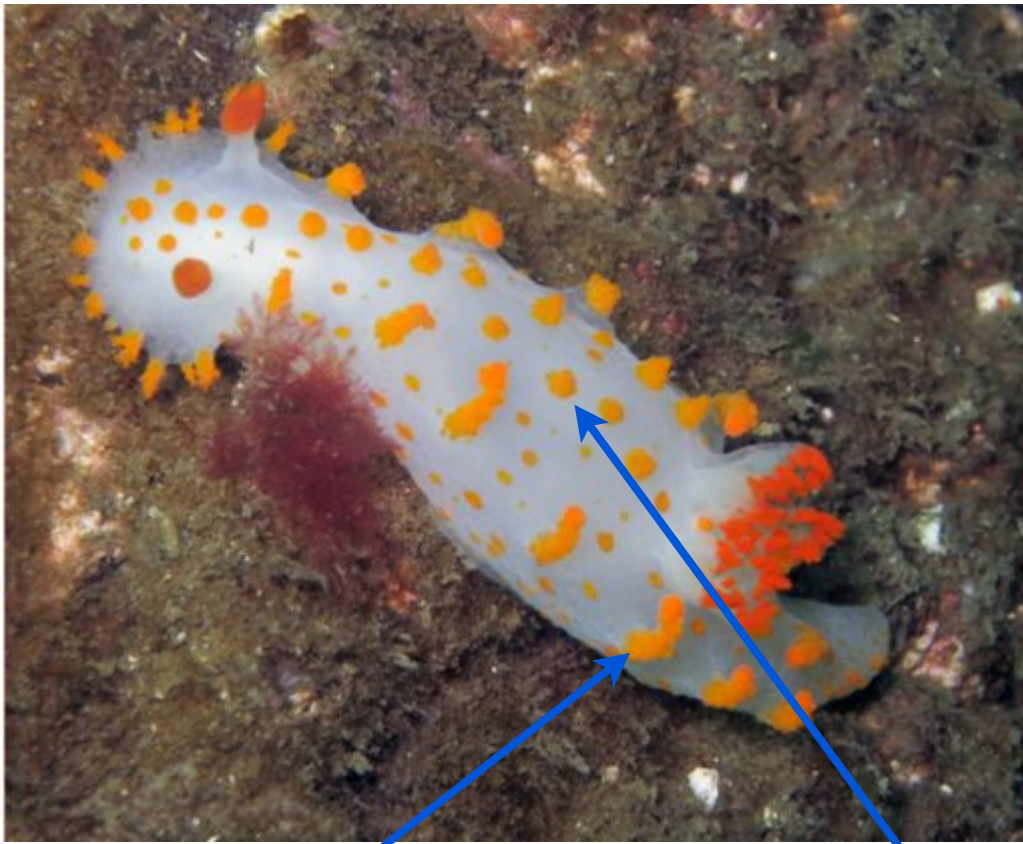
The growth characteristics of the tubercles does provide us with a way to separate the species. The Modest Clown Dorid, *T. modesta*, has "arborescent" tubercles on the dorso-lateral appendages (A) and "dendritic" (branched) dorsal tubercles (B). (**Fig. Group 1**)

Fig. Group 1



The Catalina Clown Dorid, *T. catalinae* has only small bumps on the dorso-lateral appendages (A) and the orange tubercles on the bodies are knobby but not branched (B). (**Fig. Group 2**)

Fig. Group 2



After reviewing numerous photos several photographers had taken of the Clown Nudibranch throughout the Salish Sea, it seems clear that *T. modesta* is the more common species locally. *T. catalinae* accounted for only 1.5% of the photos. While *T. modesta* was abundant, *T. catalinae* was noted for sightings in Barkley Sound and Victoria in British Columbia and in Washington it was noted at Neah Bay, Salt Creek Recreational Area, Port Townsend, the San Juan Islands and at the

Edmunds Underwater Park. *T. catalinae* is more common along the outer coasts of Washington and Vancouver Island and west portion of the Strait of Juan de Fuca than within the Salish Sea, but is still outnumbered by the *T. modesta*.

A review of our common Northwest field guides provided a mix of the two species.

Our summary:

"Beneath Pacific Tides" by Jensen, Gotshall and Miller - upper right photo is *T. catalinae*, the pictured pair are *T. modesta* and the densely spotted one is *T. modesta*

"Eastern Pacific Nudibranchs" by Behrens and Hermosillo - *T. catalinae*

"Field Guide to Nudibranchs of the Pacific Northwest" (laminated folder) by Rick Harbo - *T. catalinae*

"Marine Life of the Pacific Northwest" by Lamb and Hanby - MC318A is *T. catalinae*, MC318B & MC318C are color variations of *T. modesta*

"The New Beachcomber's Guide to the Pacific Northwest" (1st ed.) by J. Duane Sept - *T. catalinae*

"The New Beachcomber's Guide to the Pacific Northwest" (2nd ed.) by J. Duane Sept - *T. modesta*

"Pacific Reef and Shore" (2nd ed.) by Rick Harbo - *T. modesta*

"Whelks to Whales" (both editions) by Rick Harbo - *T. modesta*

Note: For folks who submit REEF surveys, both species will still be considered a single "Clown Dorid" species.

Reference:

Jung DW, Gosliner TM, Choi TJ, Kil HJ, Chichvarkhin A, Goddard JH & Valdes A. (2020). "The return of the clown: pseudocryptic speciation in the North Pacific clown nudibranch, *Triopha catalinae* (Cooper, 1863) sensu lato identified by integrative taxonomic approaches". *Marine Biodiversity* (2020) 50:84