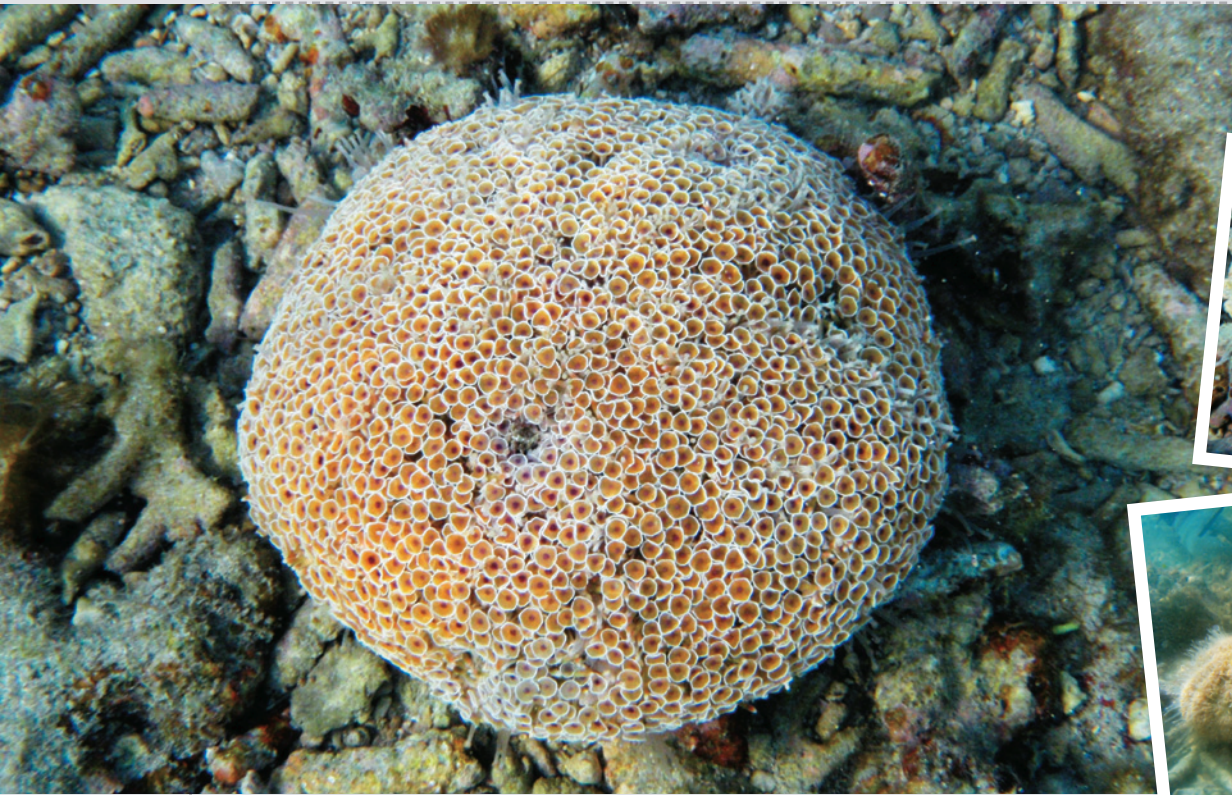




趙世民 Shyh-min Chao

1960年生於桃園，台中東海大學生物研究所博士，專長為海洋無脊椎動物生態，長期在墾丁國家公園海域進行水下調查研究工作。目前任職於台中國立自然科學博物館動物學組研究員。

Born in Taoyuan, Taiwan, holds a Ph.D. in biology from Tung-hai University. Chao specializes in the ecology of marine invertebrates, and has been long conducting underwater investigations along the coast of Kenting National Park. Chao is currently a research fellow in the Zoology Department of the National Museum of Natural Science in Taichung.



喇叭毒棘海膽 The Flower Urchin

喇叭毒棘海膽是台灣海底最漂亮的一種大型海膽，直徑可達15公分，身體表面長滿成千上萬像「喇叭花」小武器，這些小喇叭花有毒，所以稱為喇叭毒棘海膽。喇叭毒棘海膽不喜歡光線，又生活在浪區，牠們會用小石塊將身體蓋起來，一方面充當陽傘遮光，一方面增加身體的重量，以免被海浪沖上岸。颱風來時，牠們會鑽進碎石中，以避免大浪的衝擊。

喇叭毒棘海膽會在3~5月間集體生殖。牠們的生殖行為很特別，生殖前會聚集在一起，先卸下身上的小石塊、收起小喇叭花、舞動全身的短刺和管足，整群海膽突然興奮起來，再由身體頂端的五個生殖孔擠出精子和卵子，像一座座小火山爆發，海底頓時煙霧瀰漫。海膽手舞足蹈的目的是為了加速精子和卵子的稀釋、擴散，以達到成功受精的目的。

The flower urchin (*Toxopneustes pileolus*) is recognized as the most beautiful large sea urchin residing in the sea-beds around Taiwan. Measuring up to 15cm in diameter, it is fully covered with small venomous flower-shaped pedicellariae that function as weapons against predators while providing shade from the sun. One is likely to find such a dazzling creature buried under rubbles due to its need to withstand strong waves.

Flower urchins reproduce collectively between March and May. Having gathered to shake off rubbles and retrieve pincers, they break into a wild dance that involves romping appendages and stings. The worked-up congregation then erupts spermatozoa and eggs en masse through genital pores, while continuing with their frantic wiggling, which facilitates the process of dispersion and fertilization.