Scientists find Nemo's sexual secret

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ITHACA, NEW YORK - Clownfish, the colourful fish from Disney's Finding Nemo, have the ability to change their sex, biologists say.

Two-banded clownfish in Gulf of Aqaba
(Courtesy Mohammed Al Momany, National Oceanic & Atmospheric Administration/Department of Commerce)

The wild fish dwell amid anemones in the exotic reefs of Papua New Guinea. Clownfish (Amphiprion percula) live in a rigid social ladder where they change size and gender to move up the hierarchy, a U.S. scientist has found.

Peter Buston of the department of neurobiology and behavior at Cornell University studied 97 groups of clownfish, an aquarium pet.

"If the female of a group dies, the male changes sex and becomes the breeding female, while the largest non-breeder becomes the breeding male," he wrote in Thursday's issue of the journal Nature.

Forced social system

He suggests an evolutionary reason could be behind the ability. By changing size, the fish can avoid conflict in their close-knit social group. Subordinates don't become a threat to the dominant fish.

The results show growth and size changes could be a strategic response to the social environment, Buston wrote. Some other fish species are known to change sex, too.

Zoology Prof. Mark Abrahams of the University of Manitoba chaired a presentation on the research at an International Society for Behavioural Ecology meeting in Montreal last summer.

Abrahams called the results interesting, but added it is difficult to sort out if the subordinates adjusted their size rather than behavior to cause the effect.

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He also wondered why the large subordinates don't move to a different social group to enjoy a higher ranking. Buston answered it's difficult for fish to travel to another colony because the move would expose them to predators.

Written by CBC News Online staff

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