

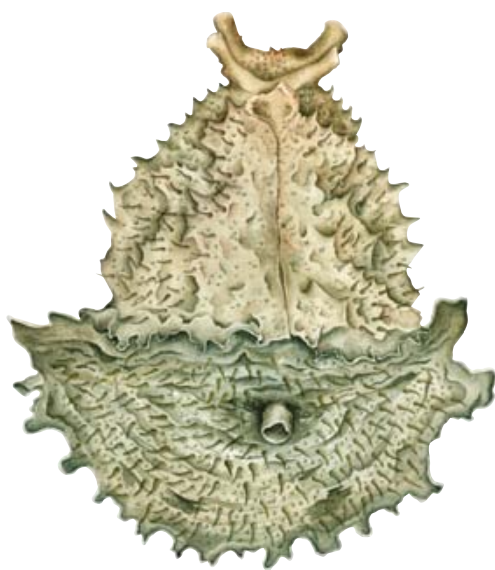
The sea hare fishery in Fiji Islands

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Introduction

Women fishers in Fiji are well known for gleaning the inshore mudflats and inshore reefs (Vunisea 1996). Marine invertebrates such as sea hares form a portion of women's catch and a good cheap source of protein (Fay-Sauni 2001). The sea hare, *Dolabella auricularia* (Lightfoot, 1786) is often gleaned by women in Fiji Islands in shallow inshore areas that are susceptible to high fishing pressure and human development. Therefore, there is a need for information on this species for managing the resource. Sea hare is a mollusc and is known in Fijian as *veata*. It is one of the fisheries resource specifically exploited by women.

In this paper, we describe the behaviour and habitats of the sea hare, *D. auricularia*, specifically collected by women in Fiji Islands. We also present a brief overview of the exploitations and sales of sea hares. Sea hares are one of the most important fisheries resources collected by women for household consumption and for sale to supplement household income. There is very little information available on the sea hare fishery and we hope this paper will provide some information in managing the fishery.



Dolabella auricularia
(artwork: Rachel O'Shea, © SPC 2009)

Description, behaviour and habitats of sea hare (*Dolabella auricularia*)

D. auricularia is a sea hare that can weigh up to 500 g. Its colours vary, but always consist of mottled shades of green and brown, which make it extremely well camouflaged in nature. It is normally found in sheltered bays or lagoons, in seagrass beds or on sand or mud.

D. auricularia is widely distributed on the mudflats in Fiji Islands. Its usual habitat is the shallow seagrass community, though it may also be found in tide pools protected by reefs. It is typically found in groups. This clumped distribution may be related to the species' breeding habits.

Sea hares are essentially nocturnal. During the day, individuals lie buried in the sand and with only their siphons exposed. This makes it very difficult to find them during the day. From late afternoon to early morning, especially during the lowest tide, *D. auricularia* are observed to feed, mate, spawn or move about (Calumpong 1979).

Exploitation and sale of *D. auricularia* in Fiji Islands

It is an important fisheries resource exploited mainly by Fijian women who spend 4–5 hours a day during low tides in the afternoons on the mudflats collecting them.

Most women in Fiji Islands glean sea hares together with other non-fish products such as shellfish, mud crabs, lobsters and seaweeds. On an average fishing trip more than 20 *D. auricularia* may be collected. Though women in most of Fiji do not normally go out to collect sea hares specifically, those from Naselesele, Taveuni take fishing trips targeting sea hare only.

D. auricularia is collected both for subsistence and sale. It is sold in the municipal markets and at stalls along the road by women. Women interviewed from around the Suva area indicated that income from the sales of sea hare help them pay school fees, buy food and pay bus fares for school children.

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The egg masses (*kavere*) are usually found near the seahare. The egg masses, the heart and the upper-side of *D. auricularia* are sold at the Suva municipal market for FJD 3.00 per heap of 30 sea hares. The underside of the seahare is usually discarded at sea by cutting the seahare in two. All the women interviewed from the Suva area stated that the underside (muscular foot) of the seahare is usually discarded because grains of sand get stuck to it.

The egg masses are also used as food in many parts of the world such as the Philippines, Samoa and Kiribati. In Fiji Islands, the egg masses and the animal are eaten either raw or half-cooked and are usually marinated with lemon juice. Sea hare is a delicacy for indigenous Fijians.

The women interviewed also said that sea hares are not found during rainy days. Research on other opisthobranchs shows that sea hares generally avoid extremely low salinity because they are not able to tolerate it or due to lack of food availability (Carefoot 1987).

Whilst the example of *D. auricularia* highlights the involvement of women in the sea hare fishery in Fiji Islands, Fijian women contribute significantly to the catch and sale of other non-fish resources. *Anadara*

antiquata (*kaikoso*) and mangrove crabs (*qari*) are collected either by hand or with traps. Small hand nets are used to collect prawns (*moci*). Other marine resources like sea urchins (*cawaki*), seaweed (*lumi, nama*) and giant clams are gleaned from reef tops and mudflats by these industrious women.

References

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