Frequently found in coastal New South Wales close to sources of shellfish, middens are deposits of shells, bones, stones, charcoal and other materials that have been discarded and slowly buried over time. Middens can provide invaluable information about Aboriginal food sources in the past.

Although plant roots and vegetation often penetrate middens, holding the heavier material in place, they can become exposed as a result of wind and wave erosion, and human activities such as sand mining and dune trampling. Sand mining has occurred along the majority of the coast of northern New South Wales, mainly targeting the mineral rutile. Unfortunately, a large number of Aboriginal midden sites have been destroyed as a result of such mining, including several around Arrawarra and Corindi.

**The Arrawarra Midden**

The Arrawarra midden lies a few hundred metres north of Arrawarra Headland at the entrance to Arrawarra Creek and approximately 1.5 metres above sea level. The midden began eroding rapidly during the 1990s. Attempts to protect it included:

- A temporary fence in 1994;
- Matting that was used as a cover; and
- An artificial dune that was constructed in front of it to prevent further damage.

To explore, document and preserve its cultural significance and heritage, the midden was then excavated. Members of the Yarrawarra Aboriginal Corporation, together with archaeologists from the University of New England, and local volunteers, commenced the excavation on the 11th of November, 1997. They carefully removed and documented all material, which is now stored at the Jalumbo Cultural Heritage Unit.

Charcoal dating (which is a scientific method used to age archaeological sites) indicated that the midden was deposited between 930 and 1,342 years ago, and had...
not been greatly disturbed since its formation. The midden mainly contained shell fragments, fish and animal bones, river stones and stone artefacts, and small amounts of charcoal, wood and seeds.

Species Found in the Arrawarra Midden

The results of the excavation found shells of *gugumbal* (turban shells - see below), mud whelks and oysters. The most common fish were bream and tarwihine, all of which appeared to be medium-sized individuals. Other fish species included snapper, whiting, blackfish, mullet, flathead, tailor and trevally. Bones of various land animals were also discovered, including snake, wallaby, bush and marsupial rat, and echidna.

“A midden is like an Aboriginal garbage dump, a place to throw all shells and bones. Bones of animals and fish [were] put in one spot so they didn’t litter [the] environment.”  
*Mark Flanders*

Gugumbal in the Arrawarra Midden

Today, the most common *gugumbal* found on rocky shores in this area is *Turbo militaris* (see Fact Sheet 5). However, remnants in the midden suggest that two other species, *Turbo torquatus* and *Turbo undulatus*, were more commonly harvested 1000 years ago. This suggests that Gumbaynggirr people living at that time may have favoured the meat of *Turbo torquatus* and *Turbo undulatus*, or that the relative abundance of the three different species has changed over the last 1,000 years.

Photos: Margie Mohring; Dee Murphy.