

## **AIS Team removal of the alien algae *Acanthophora spicifera* from fish ponds in the Kaloko-Honokohau National Park in Kailua-Kona, HI**

On June 7, 2005 four members of the DLNR-DAR Aquatic Invasive Species team (AIS) (Sara Pelleteri, Segal Boaz, Kater Bourdon and Jamie Marchetti) traveled to Kailua-Kona, HI to assist with the removal of the alien algae *Acanthophora spicifera* from fish ponds in the Kaloko-Honokohau National Park.

Due to a heavy, unidentified dinoflagellate bloom, visibility in the pond was approximately 6 – 12 inches and, once the bottom was stirred up by movement, was reduced to virtually nothing. Therefore, most of the removal consisted of feeling around in shallow areas and then pulling any *A. spicifera* that was found. The team was instructed to remove the plants from the hard substrate on which they were growing (usually the shells of native oysters) and then return the substrate to the bottom.

Algae was collected in small collecting bags and then transferred to larger burlap bags. These bags were transported by kayak across the pond to the shore where they were weighed. Algae was dumped from the bags onto tarps or in a compost bin to facilitate drying. At the end of the third day, the collected algae from all three days was taken to a green waste recycling facility.

Because of the cultural significance of the pond (King Kamehameha is rumored to be buried there and several high ranking Hawaiian royalty are known to be buried there) there are limited options as to removal methods for the algae. Because the *A. spicifera* requires a hard substrate, most of it is growing on the shells of a native oyster that grows in the ponds. However, by pulling off fragments of algae, and then returning the shells to the pond, many fragments of *A. spicifera* are reintroduced into the pond. The National Park team has access to a type of suctioning device, similar to the “Supersucker”, that was built to pick up small rocks and they are hoping to be able to modify it for algae removal, but it is not currently working. Also, parts of the ponds have extremely high sedimentation rates (team members were often up to their knees or even hips in wet, organic mud) and therefore mechanical removal by some type of suction device might be inadvisable. Suctioning might also be precluded by the fact that *A. spicifera* is found more attached to hard substrate than in large floating mats (although their suctioning device was built to pick up rocks so it probably is capable of suctioning oyster shells). However, removing the algae by hand is not very efficient.

The National Park team is interested in trying different types of removal methods, but is relying solely on hand removal for now. Because of the size of this particular pond (approximately 11 acres) and the poor visibility, eradication solely by hand removal seems unlikely. Until the final day, when several large floating mats were discovered in the back areas of the pond, total amounts of algae removed each day were small (around 10 kg each of the first two days).