# BATTLING THE KUDZU OF THE WEST

Controlling Cape Ivy (formerly "German Ivy") by Hand Removal

*-by Ken Moore, Wildlands Restoration Team*

A creeping blanket of vegetation smothering everything in its path is a daunting sight indeed. Unfortunately, it is becoming an increasingly common one as cape ivy drops its green curtain over coastal canyons and streamsides throughout much of California. Cape ivy, De*laireia odorata,* was until recently called Germany ivy, Se*necio mikanioides*. Capable of growth rates which easily outstrip native species, and possessing twining, easily broken stems able to resprout from any piece containing a single node, this plant combines the worst habits of the notorious kudzu vine and the mythical hydra. These characteristics make the prospect of controlling even small infestations of cape ivy by hand removal seem bleak indeed. - Or so I thought when our volunteer program, the Wildlands Restoration Team, first started doing battle with this scourge from South Africa in the fall of 1993.

The project area is in Santa Cruz County, along lower Waddell Creek in Big Basin State Park. For record-keeping purposes, the area was described as 19 separate sites ranging in size from about 200 sq. ft. up to about 15,000 sq. ft. A "site" is here used to mean a single area of contiguous infestation. The total area of the 19 sites is about 146,600 sq. ft., or about 3 1/3 acres. The sites were mapped and named, and detailed records of dates and hours worked and the removal method used for each site have been logged in a database since the start of the project. This has made it possible to quantify and compare the effectiveness of each removal method used.

We started out using our tried-and-true method of controlling an invasive species, which calls for targeted removal of the exotic species by hand while leaving the native flora and the site as intact and undisturbed as possible. The cape ivy was stacked on site in tall piles to minimize ground contact area. The team put in a total of 1,130 person-hours using this method; the result was nearly complete failure. Return visits to most sites two to three months later found them reinfested almost as badly as before we started. Careful inspection of the sites confirmed my suspicions: the rampant and impenetrable mess of hostile vegetation in these lush riparian zones was keeping the team from *seeing* and *getting* to the cape ivy. Places where native vegetation was initially sparse showed very little cape ivy regrowth, whereas in areas of dense native vegetation, especially stinging nettles and blackberry, the cape ivy came back immediately. Repeated attempts to rid these sites of cape ivy for the next year with our selective removal method affirmed what I already feared: This wasn't going to work.

Clearly, a new game plan was in order. When we returned to Waddell Creek to do battle in late fall of 1995, I directed a very reluctant team to completely clear the sites of anything that was keeping them from getting to the cape ivy—alive or not, native or not. Telling a bunch of experienced restoration volunteers to clear a site of all vegetation went over almost as well as if I had told them to plant yellow star thistle on our hard-won former French broom sites. In addition to being counter- intuitive, it was one heck of a lot of work. We used Pulaskis, Mcleods, bank blades, shovels , and chain saws to clear the site of all hindering vegetation. We stacked everything, piling the cape ivy separately from all other plant materials. We cut up and moved large logs which had been deposited by the high winter flows, as cape ivy loves to hide under them. Using the sharpened "hoe" , or straight edge of the Macleod, we scraped the soil clean of all duff to get rid of the nodes and roots I knew were still there. A total of 1,016 person-hours were put in to accomplish complete clearing of the 19 sites. I coined the name "scorched earth" to describe this extremely unpopular method, and I knew I stood to lose some loyal volunteers if it didn't work.

But by the end of 1996, I could see that it was working. Very little Cape ivy was in evidence on any of the sites, and most of what did come back was from previously pulled plants still hanging on to life in the piles themselves, or from areas around the perimeter of the site that had not been cleared back far enough to see those last few smaller plants lurking there. We reworked all the sites again in the spring of 1997, and this time we were able to repull the remaining cape ivy on all of them in just one team day: 238 person-hours! Our hard work had paid off, as now it was easy to see and remove any new growth on the clean sites. The people who had worked these sites previously were elated. It seemed I would not be burned on a nearby pyre of previously pulled broom after all!

On sites subjected to "scorched earth," the regrowth of natives was strong and fast, and inspiring to behold: A testimony to the vitality of these nutrient rich riparian habitats. Ironically, this vigorous native regrowth is fast becoming our biggest problem, as it makes it difficult for us to see any new cape ivy regrowth. It requires very diligent combing through the dense new growth by experienced people to find those few newly emerging plants, but so far this seems to be working, and many of our sites are showing no ivy regrowth at all this year. The old piles of cape ivy can still harbor live plants, but turning the piles over and extracting the live material once or twice has eliminated this problem on most of the sites. If the site has good sunlight availability, we spread the pile out in a 4 to 5 inch thick layer on top of 10 mil plastic. This greatly speeds up the dessication and death of any plants which are still viable.

CONCLUSION: It is possible to control cape ivy using hand removal methods. But it takes a concerted effort to accomplish, and we now know that anything short of that will meet with sure failure. Continued monitoring will be needed, as well as some repulling, depending on how thorough a job was done initially: A poor first pull will result in a site looking like it was never worked at all in a very short time! And even if nearly all of the cape ivy was removed the first time, just the small amount that is invariably missed can reestablish itself with alarming rapidity. Also, if there is a cape ivy source upstream, high water flows in the winter can be expected to transport pieces of plants downstream which can reinfest old work sites and begin new colonies. So, if you are considering tackling a cape ivy project, be sure you will be able to see it to completion before starting in. The prodigous growth rate of this green menace will quickly and dramatically advertise a failed effort, and this could handicap your ability to mobilize help for future restoration.