

Hunting *Nervilia peltata* in Charles Darwin National Park

Sunday March 28, 2004

Early Sunday morning, Dave Liddle led a group of ten TENPS volunteers to survey one of the many NT plants for which little is known, "data deficient" in the botanical terminology. The day started with Dave giving us a potted history of Charles Darwin. Of note is the impact fire has had on the ground cover and plant diversity. In 1997 a fire burnt most of the area around the survey two planned plots. Since then the area we were about to go to has been burnt on an annual basis. In this area there was a lot of sorghum with a loss of biodiversity compared to the second area that had escaped the annual burning. This led to an observation that given the amount of readily combustible fuel left from sorghum, that sorghum begets sorghum!

Kitted up with stakes, maps, clipboards, a quadrat, templates and tape we followed Dave down to a cycad plot in the regularly burnt area where the *Nervilia* were growing. After directing us in the art of flora surveys we proceeded to find the limit of the little ground orchid then lay out tapes. Using random numbers to find 0.5 metre square quadrats or plots, we got to our knees and pulled back the covering grass and leaf litter to see if any *Nervilia* were about.



Linda, Dave and Sally discuss the lay of the land whilst setting up for the *Nervilia* survey. Joyce has already spotted some little plant.

For the uninitiated, *Nervilia peltata* is a small ground orchid. At this time of year a small flat green leaf is all that can be seen. The leaf is round or oval, with a central stalk beneath that is not obvious as the leaf lays flat on the ground. From above there is a central depression with radial veins as can be seen in the illustration below. They

appeared in clumps with overlying leaves, whether these were separate plants or the same was not determined. No *Nervilia* were harmed in this survey! The largest example seen was about 35mm in diameter, the smallest a delicate 5mm.



The object of the survey is this inconspicuous *Nervilia peltata* hiding amongst the sorghum stems

From this brief look at their habitat, they appeared to prefer the damper soils, often damp enough to sustain a green algae or moss. Notable amongst companion plants were *Cycas armstrongii*, although this did not appear to be an exclusive relationship as some were also seen growing close to other woodland plants.



Marj in the shade of a cycad scribes *Nervilia* coordinates, size and features.

As you can see from the photos the work involved getting pretty close to the ground. Dave even brought hessian bags to save our knees! Even though we started early pretty soon we were all sweating away. The worry was that the salt rich droplets of sweat may have affected the orchids!

The survey collected information on the plant's location within the quadrat using

long metal rulers that were good at reflecting the sun, dazzling the data collectors! Then we assessed the leaves size and amount of grazing, obviously the latter by insects rather than cows! A few leaves appeared to have been speared by falling sorghum seeds leaving behind a neat little hole.



Michael deliberating on the location and size of a Nervilia in quadrat 3. There were 67 individuals in this quadrat, not that you can see any of them in the photo

Following the survey, rehabilitation was done by replacing the ground cover that had been shading the plants. Most of the surrounding grass had been well trampled but we hope that any *Nervilia* inadvertently stood on will survive.



Sean and Joyce at work in their quadrat; over fifty Nervilia individual to be found here.

Following the morning's work Dave took us to another *Nervilia* population where the differences in the vegetation were apparent. This second area had escaped burning since 1997 and as a consequence there were many more ironwood and Acacias to be seen with very little sorghum.



Acacia lamprocarpa in bloom seen near the second Nervillia plot, the less burnt one.



Another ground orchid Geodorum neocaledonicum, frequently found in open woodland, alas no flower.

Next year we hope to return to the plots to see the orchid earlier in the wet season, hopefully spot a few flowers and determine whether this is a threatened or stable species. TENPS involvement with this flora survey represents the Group's commitment to learning more about the local environment and allows members to make a contribution towards greater knowledge of Top End plants.

Article and photos Mark Raines

Addendum

As we never got to see the flower of Nervilia peltata, I found this picture from an orchid website. Quite delicate and inconspicuous I would expect.

http://www.speciesorchids.com/Nervilia_peltata_flower.html

