

Newsletter of the Friends of the Western Swamp Tortoise

New homes for our Western Swamp Tortoises

Dr Gerald Kuchling has been in preliminary discussions with an overseas zoo, with a view to establishing a new insurance colony! The climate there is very similar to Perth (though the nights can be a little colder) and so a letter outlining Western Swamp Tortoise requirements will be sent. The zoo in consideration suggests they could take animals immediately and without funding from us, and that they are very keen to pursue the project. However, such things move slowly due to bureaucratic requirements. After all, not just anyone is allowed to care for our precious tortoises!



The ARC Linkage project (now completed) has identified several possible sites in WA for future translocation or assisted colonisation of the Western Swamp Tortoise. Sites will now be physically examined and the water monitored to determine temperature ranges and quality. These sites would not come into use for several years, but in the long term may provide a 'climate change -proof' place to manage wild populations of the tortoises.

'Tripod' the Perth Zoo tortoise

Perth Zoo staff will go to amazing lengths to help the Western Swamp Tortoise! This is amply demonstrated by the story of 'Tripod' (female 378). After coming out of aestivation in 2012, she was found to have a broken toe, which was later amputated. She recovered well and went on to breed and lay eggs successfully. Unfortunately, an infection developed, and in January this year just prior to aestivation, X-rays revealed that osteomyelitis had spread extensively through her left fore-limb, requiring amputation to just above the elbow joint. Tripod's surgery went well, the sutures have just been removed, and X-rays reveal no signs of further infection. She will now have a slightly shorter aestivation period, and will be X-rayed again when she comes out of aestivation, towards the middle of the year. (Story based on a report by Lesley Shaw/Perth Zoo to the Recovery Team in February 2014.)



We send best wishes for Tripod's complete recovery!

Tortoise to return to airport?

Will the Western Swamp Tortoise be returned to its historical home at the Perth Airport in the near future? Commonwealth endorsement of the Recovery Plan and inclusion on its website adds some teeth to the preservation of the critical WST habitat at the airport site, so perhaps we'll see it return there yet. We'll keep you posted!

Ellen Brook Nature Reserve expands!

Alex Errington, the land acquisition officer for DPaW who has been involved in the acquisition of three earlier (or former) additions to the Ellen Brook Nature Reserve, has now finalised the purchase of a 5.4 hectare parcel to add to the reserve. This acquisition increases the size of EBNR to over 85 ha. This is particularly important in light of Gerald's analysis (opposite). Although partly degraded, the area contains Gerald's Swamp, where several WST have been discovered (outside the current Reserve) over the past years. *Thanks Alex for your great work!* Also on the topic of EBNR, look out for the new signage on the fence that runs along Great Northern Highway.

Tortoise scientist honoured

Congratulations to Recovery Team member **Dr Andrew Burbidge** for his recent **Order of Australia**, awarded for a lifetime's work in the environment.

Educating the kids

The Education Sub-Committee has visited all schools in the Ellenbrook area to deliver our new brochures and offer free presentations to their students. We were warmly received and look forward to further interactions with them.



Lunch to celebrate 10 years as Friends of the WST

Keep in mind our 10th Anniversary Special Long-table Lunch at Edgecombe Brothers Winery, coming up in July 2014. To celebrate 10 years since our group was formed, we're keen to involve all members past and present. Further details and ticket purchases from Jan 0408 024 800.

Where are they now?

In early summer adult breeding females (at least 8 years old) lay 3 or 4 eggs underground in their aestivation places near the edges of the swamps, and take no further care of them. Other adult tortoises aestivate until the swamps refill in late autumn/early winter. Aestivation is a type of hibernation or torpor that protects the tortoises from the hot Western Australian summer and—if they find suitably deep places—from bushfires.

Aestivation takes place in natural (or artificial) ground hollows or in deep leaf litter. It is a crucial time for tortoises, who must have stored up enough reserves to keep them alive through the long dry summer. Sometimes the animals come out briefly to drink, if there's been some rain (not this summer!)



Artificial aestivation tunnel

Ellen Brook Nature Reserve—are we helping the tortoises?

Despite all the recovery actions of the last 25 years the adult WST population at Ellen Brook NR currently appears to be at a level comparable to prior to the start of these actions, concludes Dr Gerald Kuchling.

- So far the south-western expansion of EBNR (1998 and 2006) has been insufficient to secure the home ranges of the WST sub-population originally residing there. (Gerald's 1989 proposal was for the inclusion of three times this area.)
- In general, without assisted recruitment ('head-starting') and temporary protection of adults in captivity, the fox-proof fence—as currently managed—is detrimental to the adult WST population at EBNR, suggesting the population would fare better without the fence.
- This is the situation for the adults. What about juveniles and hatchling recruitment?

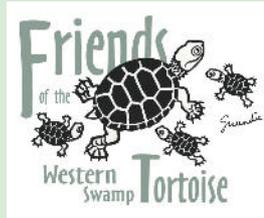
The fragmentation of home ranges established prior to fencing appears to be detrimental for adults, with 50% of long-term residents having been lost over just four years.

- WST hatchling and juvenile recruitment is heavily impacted by high bandicoot densities.
- The exclusion of foxes and one-way tortoise gates (allowing small bandicoots to enter but not to exit the fenced area) promote high bandicoot densities.
- Even with head-starting and temporary protection of adults, 24 years of fox exclusion at EBNR through fencing did not result in a lasting increase of the WST population.

Gerald believes that the management options for EBNR are:

- Foxes are known to predate WSTs of all sizes and their nests. Therefore removal of the fox-proof fence is not recommended.
- Since home range fragmentation of WSTs appears to be a serious problem for wild adults, one-way gates—with the exception of those along the Great Northern Highway—should be replaced with two-way passages for WSTs (and small bandicoots) so they can move in and out freely.
- The WST passages should be made of corner-welded steel mesh panels with rectangular openings just large enough to let through tortoises of the largest size, built into the lower part of the fence at 25 m intervals.
- The WST population at EBNR will not persist under high bandicoot densities promoted by fox exclusion. Efficient removal of bandicoots (in May & August, until no further bandicoots can be caught) for translocation to other sites can and does improve WST hatchling recruitment, but is vulnerable to political vagaries. Experience of the last seven years suggests other management options are needed in addition to this.
- Foxes may mainly be a problem for WSTs during dry periods. When swamps are flooded and tortoises are in the water, steel mesh panels with openings large enough to let through bandicoots of any size and foxes should be available in the base of the fence, then closed again with panels to let only WSTs through prior to the nesting season in late spring.
- Fox baiting should take place in spring as soon as the larger panels are closed to form WST-sized openings.
- These measures will make the fence porous for WSTs and bandicoots and still protect WSTs and their nests from foxes during vulnerable times. Bandicoots will remain at lower and more 'normal' densities; rat numbers may also be reduced.
- This approach is in contrast to the option of keeping gates open, which would allow the general public, livestock and Western Grey Kangaroos free access into the fenced area at any time of the year, which would have a negative impact.

You can help save an endangered species, right on your doorstep!
Membership of the Friends is **free** and we have lots of great activities.



Join us to help save the tortoise... because EXTINCTION SUCKS!

For further information on any of the group's activities, contact Jan on
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or check out the website

www.westernswamptortoise.com



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