

## **Submission to Senate Standing Committee on Environment and Communications**

This submission has been prepared and written by Alan W. Stephenson, National Conservation Officer for the Australasian Native Orchid Society (ANOS) and Conservation Director for the Australian Orchid Council (AOC)

Responses are provided according to the alphabetical order of the Terms of Reference.

### **(a) Management of key threats to listed species and ecological communities.**

This is initially reliant upon the recognition of said species or ecological community. This in turn, is dependent upon several factors. 1. Historical knowledge of the occurrence of both. 2. If historical knowledge is the basis for recognition, then whatever area is populated by the species or community must be set aside as a national park or permanent reserve, enshrined in irreversible legislation. 3. There must also be a determination by all levels of government to undertake proper control of these areas, which should include funding and monitoring on a basis sufficiently regular to maintain and update information relative to the long-term survival of the species or community. 4. Recognition must not simply be in a bureaucratic sense but with the recognition of the *in situ* physical presence and importance of the species or community. 5. If this area has been excised from a development by a developer, either as an environmental trade-off, or by request from an environmental authority after recognition as a threatened species or community, some form of enforceable legal requirement must be initiated to ensure the protection of the area. Assurances from developers regarding environmentally sensitive areas usually prove to be of little value.

At this juncture I must state I have no formal academic qualifications and my positions are voluntary and unpaid.

Failure to recognise a known listed species is a major problem and directly reflects on the ability and honesty of the person/s responsible for undertaking an Environmental Assessment (EA) or a complete Environmental Impact Statement (EIS) of a development of some type. My personal experiences with these problems are many and some are as follows: Most persons undertaking this work have progressed through a tertiary institution with some qualified to PhD status, usually in biology. Most are quite capable of dealing with and identifying the majority of birds, animals, trees, shrubs and water/geotechnical issues, however few are competent regarding orchids and terrestrial orchids in particular. This is in part due to the deciduous nature of most terrestrial orchid species and their reluctance to present either leaves or flowers if conditions are unsuitable in any given season. Example 1. While undertaking an EA, I was contacted by a person undertaking an EA for the same orchid species on an adjacent section of land for a different development and different employer. I was asked the question "do you know what this plant looks like?" The person then came to my work area 500 mts distant and was shown the target species, which is listed as vulnerable under the New South Wales Threatened Species Conservation Act 1995 (TSC Act). Some years prior I had inadvertently

located another terrestrial species listed as endangered under the TSC Act and the Commonwealth Environment Protection Biodiversity Conservation Act 1999 (EPBC Act), which was overlooked by a person who had undertaken an EA and written a report indicating the findings. The requirement of the NPWS Director General for this EA was that any unidentified species should be passed to a Botanical institution for correct identification, however this was not done. The surveyor actually located the endangered species prior to my find and listed the orchid as *Prasophyllum* sp. on the species list in the final report, indicating he was unable to make a correct identification of the species, despite making a correct identification of the genus. A correct identification was determined only when I showed photos of the orchid to persons with knowledge of the orchid, at what was then considered at the time to be the only known site of occurrence for that species.

Another terrestrial orchid was later discovered on the same site, again by me and this also was overlooked by all surveyors in several EA's of the site. This orchid is known from two sites only, comprising 30 plants in total and was at the time considered conspecific with another of its type, known to occur as far south as Gosford in NSW. This new find was later identified and recorded as a new species, due entirely to the rediscovery and was used as comparative material for another plant originally located at another site 30 years prior. Another EA for a development of 31 hectares allegedly completed surveys for five listed terrestrial orchid species in "three person hours", which is a physical impossibility. A recent report for a proposed golf course development stated "we have conducted driven and walked searches." This was a survey for listed orchid species in addition to other forms of vegetation. The timing of surveys is also a point of contention. Surveys for listed species, prior to a development proposal are regularly conducted in one season only, despite possible adverse weather conditions such as drought or fire. Further complications are surveys being conducted when the target species may not be in flower and the habitat being recorded as unsuitable. This has occurred for one listed species at a time when no specific habitat type was listed for that species.

Species identification by some persons regularly conducting EA work is poor and in another recent instance, an evergreen but common terrestrial species was not identified by the surveyor but again listed only at generic level as *Cryptostylis* sp. If the surveyor had looked at the rear side of the upright leaf the species would have been identified immediately. This point was not considered by the DSEWPC when the development was approved on the basis of the EA Report.

An Environmental Impact Statement (EIS) is designed to be the instrument which determines if any environmental impact will result if a development proceeds, however if the original EA is not conducted in a proper manner and fails to locate anything which will require an EIS, then the system has failed due to lazy and possibly fraudulent work practices designed to suit a developer.

**(b) Development and implementation of recovery plans.**

This is an essential factor for the long-term protection of any listed species and is usually undertaken when a species is located for the first time or subsequently discovered on or adjacent to a site proposed for development. Personal experience indicates the first consideration to be made by a developer is; *how can we relocate this problem to another area?* A statement such as this indicates the first thought is to dig up the orchid and relocate all plants to another site, not necessarily one which has identical habitat to support a rare species, largely dependent on a fungal association for survival.

Sufficient funding must be made available for any recovery plan and the length of the plan should be determined prior to any consideration such as this, to cover what may be a decade or more of monitoring any given species or community. At the commencement of one recovery plan with which I am still involved, the point was made that the pollinating vector for the species concerned was unknown, despite the species being originally described in 1803. This aspect was then incorporated as part of the recovery plan and that information is now complete. As the Australian insect population remains largely undescribed, this must be a feature when recovery plans are being considered or prepared and funding made available for contingencies such as I have just noted.

Local knowledge should be considered regarding the possible existence of any species not yet formally known or described. Occasionally local people retain such information until a development is proposed and occasionally this information can die with the holder of such information and all efforts made to contact any person/s who may be able to provide vital information to the process.

**(c) Management of critical habitat across all land tenures.**

An initial feature would be the consideration of the existence on the area concerned, of any introduced flora or fauna pests which may have an adverse impact on the species or community. I refer to the obvious; rabbits, foxes, feral domestic animals, Bitou Bush (*Chrysanthemoides monilifera*), Lantana (*Lantana camara*), Prickly Pear (*Opuntia* spp.), Patersons Curse (*Echium plantagineum*) and the not so obvious in *Phytophthora cinnamomi* (soil fungi). Introduced pests such as these (and others) cost the Australian community over \$5 billion dollars each year.

As many species of native vegetation are sensitive to uncontrolled hydrological changes, this must be recognised as a feature of the proper management of any habitat, which is critical to either a single species or community. Terrestrial orchids are especially sensitive to hydrological changes on either a temporary or permanent basis. Many are equally sensitive to rainfall, which for proper continuation of a flowering regime, must be at the correct time. It is vital that any critical habitat be maintained in a totally natural manner, where excess water is not permitted to be directed to or drained from the habitat of the species or community. The moral is

“protect and maintain the habitat and the species within will continue as they have for millennia.”

A recent consideration by the NSW Minister for Primary Industry to introduce grazing to national parks must immediately be rejected. If this is done it will save a large sum of money by avoiding court costs, damage to sensitive and perhaps critical habitat and also by avoiding reparation costs following obvious damage from hard hoofed animals, none of which are native to Australia. This same proposal was rejected in Victoria following costly court action and a so-called trial, which was merely a waste of time.

**(d) Regulatory and funding arrangements at all levels of government.**

Any funding for this program should be mainly provided by the commonwealth government but should be supported by the states and territories on a percentage basis with the commonwealth being proportionally greater, followed by the state and local government. However these percentages should be seen as flexible and local government may be asked to contribute in a small but essential manner to assure all levels of government accept responsibility for environmental initiatives. Funding should be available under this model to not only preserve and protect sensitive lands containing a threatened species or community but if such land is under single or multiple ownership, sufficient funds should be made available to purchase such land for its inclusion as part of a national park or as a separate and secure reserve. This funding model will then ensure an input from all who control sensitive lands and have a vested interest in their proper management.

**(e) Timeliness and risk management within the listing process.**

If a species or community is found to occur either during the EA process or after, a facility must be provided where the species or community can undergo an assessment to determine whether it is new to science or a geographical variety of an existing species. If the intent of this committee is to protect the environment, such a facility must be initiated. I am aware that under the NSW TSC Act a stop work order can be obtained to address this issue; however currently this can only be implemented after work has actually commenced, a situation which is clearly unsatisfactory. To achieve this, more funding should be available to employ staff and provide a workplace sufficient to achieve this aim. This is also a good point at which to employ the “Precautionary Principle”, which is provided for in environmental legislation but rarely used. The above statements rely almost entirely upon an honest and timely EA. Without this, no species or community can be assured of security.

**(f) The historical record of state and territory governments on these matters.**

I have had experiences with the environmental agencies in three states and the commonwealth and have had mixed results with all. I have written six submissions to have four terrestrial orchid species listed under either or both the NSW TSC Act and

the EPBC Act. I have also been involved in supporting submissions relating to four other species. The main point of complaint is the time taken for assessment and I am aware of the process and protocols under which the listing system must work. A recent nomination was for *Genoplesium baueri* (Brittle Midge Orchid). The submissions to the state and commonwealth bodies were forwarded in March 2010, and a state final determination to me was dated 9-11-2012. I find this delay unacceptable and at this date the commonwealth is yet to begin their assessment process. I was informed at the outset that the process would be a joint exercise; however this has proved to be incorrect and species or communities may be lost through an inability to assess their situation in a timely manner. The allocation of a "priority" determined upon the assumed importance of the species or community is not a desirable feature for a department charged with the responsibility of the environmental assessment of a species or community. I continue to stress the importance of proper funding, if indeed protection of the environment is the desired aim of this Senate committee. The incidence of endangered species throughout Australia generally is increasing, requiring a more realistic appreciation of the overall environmental situation, exacerbated by recent changes in government in Victoria, New South Wales and Queensland, all of which appear to be mounting an attack on their environment agencies.

Currently in NSW there is legislation to permit hunting in national parks, with consideration also being given to horse riding, mining and grazing. Victoria has undergone a trial to permit grazing in the Alpine National Park. Such an action resulted in an unnecessary cost to Victorian taxpayers and a dispute with the commonwealth government. The contention was that grazing would reduce the risk of bush fires, however all historical information was to the contrary and I fear NSW taxpayers will also suffer the same costly fate for no result. Horse riding is already a fact in a few national parks in Queensland and I cannot imagine horse riders being as responsible as some dog owners by collecting the faeces deposited by their animals. The possibilities of degradation via heavy and hard hooved animals and the probability of weed infestation from faeces and matter contained within hoofs is not what most people consider to be the norm in a national park. All of this can lead to serious degradation of endangered species via actual physical damage and a long-term lessening of the values of what a national park should contain after being declared a national park.

I accept a change in either a state or commonwealth government will result in changes to policy but I note the current NSW situation where the environment ministry is now devalued, as it falls under the control of premier and cabinet and is not the sole responsibility of the environment minister despite all public statements emanating from that source.

Much of this is recent history, however it appears some are unable to learn the lessons of recorded history since white settlement or the history known to exist prior.

In mid-2012 a call was heard to have some or all of the commonwealth EPBC powers transferred to the states and I should note this call came from COAG not the commonwealth. When one is in full recognition of the obvious immediate and long-term aims of some states regarding their intent to devalue the environment generally and environmental legislation in particular, I would hope such a backward move would not be contemplated by this committee or any commonwealth government. For several years, across governments of differing political persuasions, Australia has seen an overall improvement and recognition of the need to have and regularly upgrade environmental legislation. The Commonwealth EPBC Act 1999 was the necessary final piece of environmental legislation but it must be seen to be the province of the commonwealth and not transferred to the states for devaluation under the guise of reducing red tape or green tape, a term which is frequently used. Conversely I would hope the states territories and commonwealth would see some value in a true national approach and blend all environmental legislation into a single legislative framework. I see this as not only workable but necessary and with the amalgamation of agencies, the declining environmental well-being of Australia might be reversed.

**(g) Other related matters.**

In 2009 a legislated review of the Commonwealth EPBC Act was undertaken. I forwarded an initial submission, later accepted the invitation of a face-to-face meeting with the review panel and subsequently forwarded a submission to the Interim Report of the panel. Unfortunately little has progressed from that point, in part due to ministerial changes and what I assumed to be a reluctance to undertake any serious assessment of the findings of the report, apart from an address to the National Press Club. At this address Minister Burke mentioned “the ambulance at the bottom of the cliff”, which indicated that in some instances a development was either ceased or put on hold owing to the discovery of a hitherto unknown endangered species or community. His thoughts then were to have the entire continent mapped to ensure development areas could be set aside and development could proceed with certainty in the knowledge of no environmental constraints.

Unfortunately this will never happen, as at this time there are insufficient honest and capable persons within Australia to undertake such extensive surveys and if this were to be initiated, the time required would be the largest barrier to so-called environmentally acceptable development zones. I also feel all states would contest any such concept proposed by a commonwealth government, particularly given the time frame for completion of these surveys and the certainty of changes in commonwealth, state and territory governments, which have the probability of occurring every four years. The factors which might negate such a proposal, which I assume would require any given area to undergo an environmental assessment in a single season, are variable weather conditions. These natural events include periods of drought, flood and fire. Unnatural events would include road building, school construction, farming and forestry operations, already at the planning level or being considered for the longer term. A single year is insufficient for any environmental assessment but this is how these assessments are usually conducted.

During the review process I was led to believe that nomination for listing would be a joint commonwealth/state process but little has flowed from the review which I understood was to provide a positive improvement in endangered species protection. To date this has not occurred.

There are others factors seemingly designed not to locate endangered species and these are the methods used to undertake surveys. In most environmental assessments to which I respond via written submission, I note the method preferred and used is referred to as "The Random Meander Technique, as described by Cropper 1993." This method is seriously flawed even if undertaken as described, as it requires a list of species located during surveys to be recorded in the EA Report but frequently this list fails that requirement as the reader of the EA is rarely informed of what species were located as part of the required EA. Deciduous terrestrial orchids are considered difficult to see in a natural habitat but this complaint comes mainly from some of those charged with the responsibility of the assessment. The "Random Meander Technique" involves a non systematic meander over the development site (regardless of its size) with the additional introduction of a few 20 mtr x 20 mtr survey plots. These plots are allegedly scattered throughout the site in the habitat of the target species. Irregular inspections of the plots are undertaken and if the target species is not located within such an area it is declared as not existing on the site. Terrestrial orchids are notorious for being located in atypical habitat and 28 years experience with orchids of all types will attest to this. Any survey for such species must be undertaken using a systematic transect method, preferably no greater than at five metre intervals and no other method will suffice. The reason for this is the angle of view of the human eye is unable to see at an angle greater than 49° without a sweep of the head, which leads to sections of the site not being seen if transects of 10 metres or greater are used. Such transects are designed not to locate these species which in most instances will be bypassed by those with little interest or experience.

Persons undertaking EA and EIS work in NSW have access to the NSW Wildlife Atlas, which occasionally lacks up to date site information in the form of wildly inaccurate location details for some endangered species.

Several states have or had special clause or sub section within their environmental or planning legislation which overrode environmental legislation and in NSW it was Part 3a of the NSW Planning Act. Although now not in use there are approximately 500 development projects remaining to be assessed under this developer friendly clause. Other states use the Regional Forest Agreement in the same vein.

Private Native Forestry (PNF) is also another destructive mechanism which is being perpetrated upon the NSW Southern Table Lands (and also in the north of NSW). In the Mt. Rae of NSW district logging is being conducted solely for fire wood, in the habitat of endangered species. Statements made by persons who should be better informed have been made indicating Koalas will benefit from logging of their habitat. Proponents of logging a forest for fire wood also indicate endangered orchids would

benefit from thinning of trees within their habitat. Such statements are ill informed and incorrect and at odds with any conservation ethic and all available scientific knowledge. The damage done to the forest floor by the machine used to harvest trees for fire wood is substantial and severe disturbance of the soil surface and ground cover is but one result, erosion is also a serious consideration. I must note that replanting following logging under PNF is not a consideration and is also not a requirement.

Other unsavoury practices being conducted, which have the capacity to destroy habitat and therefore species and communities is mining. In its various forms, including coal mining it causes water to be drained from existing rivers and creeks and also underground aquifers, such as Thirlmere Lakes. Coal Seam Gas and Bauxite mining are also being considered and in some instances being conducted over many hectares in numerous areas throughout NSW, Qld and Victoria, whereas in Western Australia, the mining of sand for a wide range of minerals is widespread. All of these enterprises have the capacity to reduce habitat and cause immense destruction, not only to the surface area of Australia but rid vast areas of their only source of water regardless of what process is used. Enabling an increased access to valuable underground water system to support an increasing population will not provide the amenities expected of a civilized society.

BioBanking was introduced into NSW several years ago and it was designed to allow development despite a threatened species or community being located within the development footprint. A points scale would be applied to the development area according to the environmental values if significant environmental features were located. A like for like swap of land was to apply depending on the amount of points produced by the scale; however this system has been manipulated by many parties and is now merely a bargaining point for the developer who wishes to exchange any section of land irrespective of whether it has the required environmental value.

My earnest hope is that this committee will recognise the failings in the greater environmental system and introduce and apply the findings of the EPBC Review Panel and give this act the ethic and authority it deserves. Further information or comments which have been presented by this writer can be found in the submissions I contributed EPBC Review Panel on this and associated matters to that process.

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