



FLORA AND FAUNA GUARANTEE ACT 1988

NOMINATION OF A TAXON FOR INCLUSION IN, REMOVAL FROM OR AMENDMENT TO THE FFG ACT THREATENED LIST

Guidance for nominators of a taxon

This document provides information to support members of the public to complete the form to nominate a taxon (i.e. genus, species, subspecies or variety) for assessment as threatened under the *Flora and Fauna Guarantee Act 1988* (FFG Act). The appropriate category of threat will be confirmed during the Scientific Advisory Committee's (SAC) assessment and recommendation process, and if the SAC recommendation is endorsed by the responsible Ministers, the change will be reflected in the next update of the FFG Threatened List.

A taxon may be nominated under the FFG Act:

- for listing in one of the threat categories on the Threatened List
- to be moved to a higher or lower threat category on the Threatened List, or
- to be removed from the Threatened List.

All plant, fungi, vertebrate and invertebrate taxa native to Victoria can be nominated to be listed under the Threatened List. If the nomination is accepted as meeting at least one of the criteria described in the FFG Regulations 2020 (based on the International Union for Conservation of Nature (IUCN) criteria for taxa at risk of extinction), then the taxon will be listed in one of the following categories:

- Extinct (EX)
- Extinct in the Wild (EW)
- Critically Endangered (CR)
- Endangered (E)
- Vulnerable (V)
- Conservation Dependent (CD - in the case of a fish assessed as CD under the laws of another jurisdiction).

To nominate a taxon that is likely to be threatened nationally as well as in Victoria, use the forms at <https://www.environment.gov.au/biodiversity/threatened/nominations/forms-and-guidelines> and send a copy of the completed form to the Secretary of the Scientific Advisory Committee at sac.secretariat@delwp.vic.gov.au

As nominator, your details are automatically subject to the provisions of the *Privacy and Data Protection Act 2014*. Please see the Privacy Collection Statement on the Nomination Form.

Prescribed information required for nominations

The FFG Act requires that a nomination should include a minimum amount of information, known legally as 'prescribed information'. Nominations without this information may be rejected as being invalid by the Scientific Advisory Committee. Prescribed information is included in the green-shaded boxes in the nomination form:

- **Identification of the nominator/s.** Note that the nominator is de-identified before consideration by the SAC to ensure independent decision making.
- **Identification of the nominated item,** including the scientific name, taxonomy and description - this is important to ensure that there is no ambiguity or confusion about the nominated item.
- **Criteria satisfied, and the reasons why** - anyone nominating an item for listing must present a case that the item meets the criteria to be listed, to change category of threat, or be de-listed, as set out in the FFG Regulations. Brief, specific evidence of population size, decline, or critical information relevant to susceptibility to future threats, should be provided.

It is the task of the nominator to seek out the evidence to support the nomination. The SAC then assesses the evidence provided and may supplement the case with information supplied by other experts, published literature and from the expert knowledge of the members. A recommendation is made on the basis of available evidence.

The prescribed information is set out at Schedule 4 of the Flora and Fauna Guarantee Regulations 2020.

<https://www.legislation.vic.gov.au/as-made/statutory-rules/flora-and-fauna-guarantee-regulations-2020>

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| SCIENTIFIC NAME OF THE TAXON |
| e.g. <i>Lachnagrostis semibarbata</i> var. <i>filifolia</i> |
| COMMON NAME(S) |
| e.g. Purple Blown-grass |
| TAXONOMY Please note that a taxon is only considered valid if it is accepted by Museums Victoria or the Royal Botanic Gardens Victoria. <i>If the taxon is not conventionally accepted, please provide the following information:</i> (a) a manuscript quality taxonomic description of the taxon; and (b) evidence that at least one voucher specimen is lodged with a relevant scientific institution. |
| e.g. <i>Lachnagrostis semibarbata</i> var. <i>filifolia</i> (Vickery) A.J.Br. <i>Muelleria</i> 38: 23 (2019) Previously <i>Lachnagrostis punicea</i> subsp. <i>filifolia</i> . |
| REASON FOR NOMINATION |
| <input type="checkbox"/> (a) Listing <input type="checkbox"/> (b) Transfer to another category <input type="checkbox"/> (c) Delisting |
| EVIDENCE <i>Summarise evidence that the taxon is:</i> (a) eligible for addition to the FFG Threatened List as it satisfies any of the primary criteria. Note: nominators are encouraged to include evidence against as many criteria as possible. (b) eligible for listing in a higher category of threat; or no longer eligible in its current category of threat and is being nominated to a lower category. Note: this could be as a result of taxonomic change (either splitting an existing taxon into two or more taxa or lumping with another taxon). (c) is no longer a conventionally accepted taxon and the sources of that evidence; or no longer satisfies any of the primary criteria and should be removed from the FFG Threatened List. |
| <i>This can be just a few sentences explaining the expected category of threat and the criteria satisfied in the Regulations e.g.</i> <ul style="list-style-type: none"> The item should be listed, as it has undergone a very severe reduction in numbers over the last X years. It occurs in a very small area of western Victoria, is continuing to decline and all populations are threatened by Y; OR The item was previously listed as Endangered, but new populations have been found at Z and numbers may increase into the future. <i>Detailed evidence can be provided in the following sections.</i> |
| SPECIAL NEED |
| <i>If the nomination is to list an item below the level of subspecies, variety or forma (for plants and fungi) e.g.</i> |

distinct population, describe the special need.

Examples:

- The item is geographically, morphologically and ecologically distinct from other populations within the taxon and is under pressure from threats not experienced by other populations.
- The item is genetically distinct from other populations within the “parent” taxon and the genetic makeup makes the item critical to the adaptive capacity of the parent taxon.

DESCRIPTION

Provide a description of the taxon, which unambiguously distinguishes the taxon from all other taxa; and indicates whether the taxon is a vascular or a non-vascular plant, vertebrate or invertebrate animal or some other form of life.

Include where relevant its distinguishing features, size and social structure (notes advising this can be gleaned from relevant texts or websites).

For example:

The Ground Cuckoo-shrike is a terrestrial passerine bird that feeds from the ground. It is a graceful, slender bird, and the largest of the cuckoo-shrikes, measuring 33-37 cm in length and weighing approximately 115 g. The head and upper body are pale grey; wings and the long slightly forked tail are black, contrasting with the finely barred white lower back, rump and underparts. The face has a black mask and pale-yellow eyes (Pizzey & Knight 2012). The species mainly inhabits wooded farmlands and dry woodlands in the semi-arid parts of the Murray River valley (Emison et al. 1987).

The following fields are not prescribed information but include additional information that may be used in assessing the nomination:

- Figures, tables and maps can be included at the end of the form or provided as separate electronic files or hardcopy documents (referenced as appendices or attachments in your nomination).
- Reference all information sources, both in the text and in a reference list at the end of the form. Include your or others’ personal observations or other anecdotal information as *pers. comm.*, and in the reference cite the name of the person and the date the communication was made.
- Identify confidential material and the reason why it is sensitive. FFG nominations may sometimes be made available to state and territory government agencies and scientific committees.
- Please email sac.secretariat@delwp.vic.gov.au for further advice on completing the nomination.

1. LIFE HISTORY / BIOLOGY

As far as possible, include information on:

- *life cycle including age at sexual maturity, life expectancy and natural mortality rates*
- *specific biological characteristics*
- *the taxon’s habitat requirements*
- *for fauna: feeding behaviour and food preference and daily/seasonal movement patterns*
- *for flora: pollination and seed dispersal mechanism*

For example:

The taxon is a freshwater species, the larvae of which possibly disperse via marine environments. They are relatively mobile and possibly amphidromous. Adults are thought to spawn in fresh water during late summer and early autumn, with juveniles appearing in spring. Eggs are demersal and laid on rocks and are then fanned and guarded by the male after being fertilised. Adults and juveniles can climb instream barriers such as waterfalls and dams (Pusey et al. 2004).

2. HABITAT

Describe the habitat suitable for the taxon (biological and non-biological). Include descriptions of specific purpose habitat (e.g. foraging, breeding, roosting, seasonal migration, different life stages). If known, describe details of the taxon's distribution e.g. along rivers/riverbanks or scattered on rocky outcrops above a certain elevation.

For example:

The taxon occurs typically in dense emergent vegetation (especially tall sedges, reeds or rushes) of freshwater swamps, lakes and water courses. The vegetation stands used can range from large to very small (only a few square metres). The birds forage for invertebrates or small fish, lunging their bills into water for prey from a perch on emergent vegetation, or when standing or stalking in shallows. They nest and roost in dense vegetation (especially reeds and rushes), rarely emerging into open positions where they can be seen by observers. Moreover, they are rather silent, increasing the difficulty of detection. Less commonly used habitats include inundated shrub thickets, mangrove swamps or *Juncus*-dominated saltmarsh around brackish-saline wetlands. There are also presumed vagrant records from cereal crops and vegetable gardens, and the birds may perch in trees if flushed.

3. GENERATION LENGTH

Past and future reduction are based on 3 x generation length or ten years, whichever is the longer, up to a maximum of 100 years into the future. Estimation of the generation length is critical to determining reductions in population size.

Generation length can be described in several ways:

- It is the average age of parents of the current cohort. Some age classes may be more successful recruiters, so the average can be skewed towards this age class.*
- It reflects the turnover rate of breeding individuals in a population.*
- It is greater than the age at first breeding and less than the age of the oldest breeding individual.*
- It can be calculated as $(\text{longevity} + \text{age at maturity})/2$.*
- For plants it is the mean interval over which the current cohort of mature individuals is replaced by the next cohort and often exceeds the longevity of each cohort.*
- Where generation length varies under threat or disturbance e.g. fire or inundation that triggers recruitment, the more natural, pre-disturbance generation length should be used.*

If possible, please indicate which measure of generation length has been used and your qualitative assessment of its reliability.

If generation length is unknown, provide information, as far as possible, about the taxon's longevity, age of sexual maturity, form of reproduction, triggers for germination/recruitment.

This information is required to determine the time period over which the past or future reduction in population can be measured i.e. past reduction over a time period of three generations or ten years, whichever is longer.

Relevant to FFG Criteria 3.1.1, 4.1.1, 5.1.1

(IUCN criteria A1, A2 and A4.)

Or future reduction over a time period of three generations, or 100 years, whichever is shorter.

Relevant to FFG Criteria 3.1.1, 4.1.1, 5.1.1

(IUCN criteria A3 and A4.)

For example:

Age at first breeding is about one, and the animals continue breeding all their lives. Museum specimens from the 1960s (pre-chytrid) were aged at least six years old. The breeding age is therefore assumed to have been about 1-7 years. Older, bigger animals produce more young than younger ones, so the average of the breeding

range is skewed towards the older age group, so the generation length is about three to five and a half years.

4. THREATS

Name and describe the threat/s. As far as possible:

- Give details of impacts on the taxon as a whole, and/or specific subpopulations and habitats.
- Describe the level of threat to the conservation of the taxon i.e. how serious is it.
- Describe the time period of the threat/s i.e. past, present, future.

This information is important to identify:

- why a taxon is undergoing a past or future decline over a set time period,
- continuing declines in numbers and habitat over an indefinite time period,
- the number of threat-based locations (see definition for **6. Locations** on page 11.)
- whether the taxon is very restricted.

(Relevant to potentially all FFG and IUCN criteria A,B,C,D2.)

For example:

Historically, the Victorian population of the taxon is presumed to have been depleted almost to the point of extinction through loss of rainforest and associated riparian habitat in the X river valleys (and possibly elsewhere in East Gippsland such as the Y River valley), through vegetation clearance for agricultural and township development.

All members of the taxon are directly threatened by stochastic events such as fire or flood and by browsing pressure, particularly by domestic cattle and Sambar Deer. It is selectively targeted for browsing by Sambar which are undergoing a population explosion throughout the region. The taxon is also indirectly threatened by the further degradation of the rainforest habitat through weed invasion and fragmentation or accidental destruction during weed control or other river works.

The recently rediscovered population immediately upstream of Z River township is further threatened by elimination through stochastic events, since the population is reported to comprise only seven plants including four male and three female plants (one female plant, the first to be recorded, has not been found since 19xx). Furthermore, there is evidence that the population is highly vulnerable to browsing pressure, particularly from domestic cattle. This appears to limit the population to protective blackberry thickets and the camouflage of non-palatable native secondary rainforest species.

5. POPULATION

This is measured as the number of mature individuals, and is the number of individuals capable of reproduction, even if they are not currently breeding or are excluded from breeding by social hierarchy.

- Mature individuals that will never produce new recruits should not be counted e.g. if densities are too low for fertilization.
- In the case of populations with biased adult or breeding sex ratios, it is appropriate to use lower estimates for the number of mature individuals, which take this into account.
- Where the population size fluctuates, use a lower estimate. In most cases this will be much less than the mean.
- In the case of taxa that naturally lose all or a subset of mature individuals at some point in their life cycle, the estimate should be made at the appropriate time, when mature individuals are available for breeding.
- Re-introduced individuals must have produced viable offspring before they are counted as mature individuals.

What is the current number of mature individuals? If not known, please explain why.

Relevant to FFG Criteria 3.1.3, 3.1.4, 4.1.3, 4.1.4, 5.1.3, 5.1.4, 5.1.5 (IUCN criteria C and D)

For example:

The birds are spring and summer visitors to Victoria, occurring as very widely scattered singles or pairs. To date, there are approximately 340 records in the state on the Victorian Biodiversity Atlas. D & S (1989) noted that records are low but widespread over most of the State in treed habitats. While accurate population estimates are not available, D & S (op. cit.) suggested a possible density of one pair per 1200 km², and noted it is likely that well below 50 pairs occur in the State (based on likely suitable habitat i.e. forests and woodlands - excluding softwood plantations). G (1992) estimated there may be about 20 pairs occurring in the state, and D (2017, p. 102) indicates that: 'The population is estimated at 20-50 pairs in Victoria...'

Or

There have been no demographic studies and no targeted surveys or monitoring during the last thirty years, so there is insufficient evidence to determine the number of mature individuals.

How have these figures been derived?

Is the information based on results of monitoring, occasional observations, habitat distribution, modelling?

Are there **extreme fluctuations** in population size (i.e. tenfold increase or decrease)? *Provide details.*

Extreme fluctuations are wide, rapid and frequent fluctuations, typically with a variation > one order of magnitude (i.e., a tenfold increase or decrease).

Most plants and animals will not demonstrate extreme fluctuations, but a few e.g. annual plants, small mammals with boom/bust lifestyles, some invertebrates, will show this.

Relevant to FFG Criteria 3.1.2(c), 3.1.3 (b)(iii), 4.1.2(c), 4.1.3 (b)(iii), 5.1.2(c), 5.1.3 (b)(iii); (IUCN B1c, B2c, C2b)

For example:

Population size and density are likely to be subject to extreme fluctuations in at least a proportion of the population, in response to fluctuations in flood intensity, frequency and duration, determined by alternating La Niña and El Niño events.

6. TRANSLOCATIONS AND CAPTIVE/ENCLOSED SUBPOPULATIONS

Have there been translocations (introduction or re-introduction)? If yes, how long ago?

Is there observed reproduction within the translocated/introduced subpopulations? *If so, please provide details.*

Note that this can influence the count of the number of mature individuals.

Wild subpopulations resulting from introductions outside the natural range can be included if all of the following conditions are met:

- The known or likely intent of the introduction was to reduce the extinction risk of the taxon being introduced. In cases where the intent is unclear, the assessors should weigh the available evidence to determine the most likely intent.*
- The introduced subpopulation is geographically close to the natural range of the taxon. What is considered to be geographically close enough should be determined by the nominator, considering factors such as the area of the natural range, the nature of the landscape separating the natural and the introduced range, and whether the taxon could have dispersed to the introduced range without the effects of human impacts such as habitat loss and fragmentation.*
- The introduced subpopulation has produced viable offspring (i.e., offspring that have reached maturity or are likely to do so).*
- At least five years have passed since the introduction.*

7. SUBPOPULATIONS

These are defined as geographically or otherwise distinct groups in the population between which there is little

demographic or genetic exchange (typically one successful migrant individual or gamete per year or less).

How many subpopulations are there? Provide details if known. Include:

- coordinates if possible
- land tenure
- survey information
- site / habitat condition.

Relevant to FFG Criteria 3.1.3 (b)(i),(ii), 4.1.3 (b)(i),(ii), 5.1.3 (b)(i),(ii); (IUCN C2a(i),(ii))

For example:

There are four subpopulations, separated by habitat barriers and distances too great for the subpopulations to exchange genetic material or for recruits to move between subpopulations. The taxon does not have mechanisms for long-distance dispersal.

Are there **extreme fluctuations** in the number of subpopulations?
If yes, provide details.

YES / NO / UNKNOWN

As above

8. FRAGMENTATION

This refers to the situation in which increased extinction risk to the taxon results from the fact that most of its individuals are found in small and relatively isolated subpopulations (in certain circumstances this may be inferred from habitat information). These small subpopulations may go extinct, with a reduced probability of recolonization.

A taxon can be considered to be severely fragmented if most (>50%) of its total area of occupancy is in habitat patches that are:

- smaller than would be required to support a viable population, and
- separated from other habitat patches by a large distance.

It can be argued that, depending where they are in the landscape, very small subpopulations are indeed not viable in the long term, because their small size makes them vulnerable to existing threats or stochastic events, and also to possible inbreeding.

Relevant to FFG criteria 3.1.2(a), 4.1.2(a), 5.1.2(a); (IUCN B1a, B2a)

Is the distribution severely fragmented?
If yes, provide details.

YES / NO / UNKNOWN

For example:

Each discrete occurrence is confined to small and isolated habitat remnants in a highly fragmented and degraded rural landscape, at separations greatly exceeding the dispersal range of the taxon which has no specialised mechanism for long-distance dispersal. OR

Seeds of the taxon are not wind-dispersed, and there is little likelihood of recolonisation of sites in the event of local extinction. There are 3 subpopulations, each separated by at least 7 km of lower-altitude forest, which acts as a barrier to both genetic exchange or dispersal.

9. REDUCTION

Past and future reductions are based on three times the generation length or ten years, whichever is longer, up to a maximum of 100 years in the future. For short-lived species (e.g. annual plants which recruit successfully in all or most years, many invertebrates, some small birds or mammals), you can only consider declines in the very

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| <p>recent past or future. For long-lived species (e.g. eucalypts), a past decline might be considered back to pre-European times.</p> <p>Future declines are based on three times the generation length or 100 years, whichever is shorter.</p> <p>Note that if you have not been able to determine the generation length, please attempt to identify declines that are relevant (as far as possible) to the longevity of the taxon.</p> | |
| <p>What evidence do you have of past decline in the number of <u>mature individuals</u> and over what time period? Provide percentage if possible. If there is no information, please explain why.</p> | |
| <p>Relevant to FFG criteria 3.1.1, 4.1.1, 5.1.1; (IUCN A1, A2, A4)</p> | |
| <p>For example:</p> <p>Over the last 150 years, there has been an estimated 50-70% decline, based on habitat loss to agriculture and urban development in some districts, habitat degradation in response to a wide range of management practices and the significant impact of rabbit browsing.</p> | |
| <p>If the trend is a decline in population size, are the causes of the reduction understood?</p> | <p>YES / NO / UNKNOWN / NOT APPLICABLE</p> |
| <p>Have the causes of the reduction ceased?</p> | <p>YES / NO / UNKNOWN / NOT APPLICABLE</p> |
| <p>Are the causes of the reduction reversible?</p> | <p>YES / NO / UNKNOWN / NOT APPLICABLE</p> |
| <p>What evidence do you have of future decline in the number of <u>mature individuals</u> and over what time period? Provide percentage if possible. If there is no information, please explain why.</p> | |
| <p>Relevant to FFG criteria 3.1.1, 4.1.1, 5.1.1; (IUCN A3, A4)</p> | |
| <p>For example:</p> <p>A future population decline of 80 to 90% over the next 30 years is projected, based on coarse survey data and reduction in water level, limited recruitment, low genetic variability, the continuing threat of trout invasion, and continuing impacts from fire and drought on the extremely small remaining population.</p> | |
| <p>Has there been observed evidence of mortality? <i>If so, provide details.</i> <i>This information assists in determining the generation length i.e. turnover in population.</i></p> | |
| <p>Has there been observed evidence of recruitment? <i>If so, provide details.</i> <i>This information assists in determining the generation length i.e. turnover in population.</i></p> | |
| <p>Is there a continuing decline in the number of mature individuals over <u>any</u> time period into the future? <i>If so, provide details.</i> <i>A continuing decline is a recent, current or projected future decline (which may be smooth, irregular or sporadic) which is liable to continue unless remedial measures are taken. Fluctuations will not normally count as continuing declines, but an observed decline should not be considered as a fluctuation unless there is evidence for this.</i></p> | |
| <p>Relevant to FFG criteria 3.1.2(b), 3.1.3, 4.1.2(b), 4.1.3, 5.1.2(b), 5.1.3; (IUCN B1b, B2b, C)</p> | |

For example:

Continuing decline in population size is based on the ongoing impact of the identified threats, i.e. habitat loss and modification through agricultural activity, hydrological modification, weed invasion, climatic drying and warming, reduced reliability of winter rainfall and the increasing risk of adult mortality, recruitment failure and seedbank depletion.

Is there a continuing decline in area, extent or quality of habitat over any time period into the future? *If so, provide details.*

For example:

The habitat continues to decline as a result of the identified threats. Increased drying and more frequent and intense fires may lead to reduced water flow and quality, and increased sedimentation and "black water" events.

10. GEOGRAPHIC RANGE

Distribution in Victoria

Although DEECA will assist with generating a distribution map, please provide a brief description of the distribution, and include, if possible, the most distant records, the number of records and the source. If possible, attach a map.

The FFG criteria for this measure are based on the IUCN criteria, which use Extent of Occurrence (EoO) and Area of Occupancy (AoO) as measures of risk, not of actual habitat. These measurements are derived from confirmed, post-1970 records in the Victorian Biodiversity Atlas (VBA).

Extent of Occurrence is defined in the 2022 IUCN Guidelines as "the area contained within the shortest continuous imaginary boundary which can be drawn to encompass all the known, inferred or projected sites of present occurrence of a taxon, excluding cases of vagrancy." EoO reflects the spatial spread of risk from threats across the taxon's range. It is therefore an index of how resistant a taxon may be to threats spread across a wide range and is not intended to be an estimate of the amount of occupied or potential habitat, or a general measure of the taxon's range.

Area of Occupancy is defined in the Guidelines as "a scaled metric that represents the area of suitable habitat currently occupied by the taxon." It is not intended to be a real representation of the actual area occupied by the taxon but is "a measure of the 'insurance effect,' whereby taxa that occur within many patches or large patches across a landscape or seascape are 'insured' against risks from spatially explicit threats."

EoO is calculated by taking all locationally accurate and extant VBA records for a species and drawing a polygon around them. This can include occupied habitat, non-occupied habitat or unsuitable (or even impossible) habitat. It excludes territory outside the state of Victoria, for example in New South Wales.

AoO is derived by drawing a 2 x 2 km square around each confirmed record and summing the areas within the squares.

Once a nomination is received, DEECA support staff will generate a map, showing VBA records with the EoO and AoO calculated. Some records may be excluded from the calculations because, for example:

- the taxon no longer occurs in this locality;
- the taxon is a "vagrant" i.e. passing through or over an area but not resident;
- the taxon is an escapee from a wildlife park or garden; or
- the record is from a translocated population, that does not satisfy the IUCN conditions for inclusion.

Relevant to FFG criteria 3.1.2, 4.1.2, 5.1.2; (IUCN B1, B2)

11. SURVEY EFFORT (Provide details)

This information assists in assessing the reliability of the information. It can range from incidental observations to targeted surveys.

12. VERY RESTRICTED

A taxon's distribution is very restricted when a taxon's area of occupancy is typically (but not absolutely) less than 20 km² or it exists at typically five or fewer locations (can be more), and if there is a plausible natural or anthropogenic threat. This restriction makes the population prone to the operating threats and is thus capable of becoming Critically Endangered or even Extinct within a time period of one or two generations at any time in the future.

Relevant to FFG criteria 5.1.5; (IUCN D2)

Is the distribution very restricted?
If yes, provide details.

YES / NO / UNKNOWN

Example:

The taxon has a restricted distribution (i.e. AoO is 21 km² and has 2 locations), such that this restriction makes the taxon capable of becoming CR or EX within a time frame of 30 to 60 years, in response to the projected threats of habitat loss and herbivory.

13. LOCATIONS

As described in the IUCN criteria, a location is not a geographic place, area or locality. It is defined as a geographically or ecologically distinct area in which a single threatening event or suite of events can rapidly affect all individuals of the taxon present. The size and shape of the location depends on the area covered by the threatening event and may include part of one or many subpopulations. Where a taxon is affected by more than one threatening event, location should be defined by considering the most serious plausible threat. Several threats acting together can also be considered. Locations may also be identified on the basis of land tenure e.g. a threat may operate more strongly on private land than on public land, depending on management practices.

Relevant to FFG criteria 3.1.2(a), 4.1.2(a), 5.1.2(a); (IUCN B1a, B2a)

At how many locations does the species occur?

If you have provided a number, explain how this was derived:

For example:

The main threats to the taxon (i.e. water extraction and wetland eutrophication) have a non-reversible impact on the individuals of the taxon and have the potential over time to threaten the majority (and any) of the individuals in the geographic area. There are considered to be 3 such areas, so there are considered to be 3 locations.

14. REFERENCES

FFG Regulations 2020 <https://www.legislation.vic.gov.au/as-made/statutory-rules/flora-and-fauna-guarantee-regulations-2020>

IUCN (2022) *Guidelines for Using the IUCN Red List Categories and Criteria*. Version 15.1 (July 2022).
<https://www.iucnredlist.org/resources/redlistguidelines>