

BIRDS

During our stay at Meentheena, we kept an approximate tally of bird species seen during the trip. The list given below is far from comprehensive. Serious birding would need to be done early each morning, about when we were clearing our pit traps. Even so, the list is not a bad one.

Emu
Brown quail
Black swan
Black duck
Grey teal
Australasian grebe
Darter
Little black cormorant
Little pied cormorant
Australian pelican
White-necked heron
White-faced heron
Nankeen night heron
Great egret
Black bittern
Straw-necked ibis
Yellow-billed spoon-bill
Jabiru
Black shouldered kite
Black-breasted buzzard
Black kite
Whistling kite
Spotted harrier
Wedge-tailed eagle
Little eagle
Little falcon
Brown falcon
Nankeen kestrel
Buff-banded rail
Australian bustard
Little button quail
Bush stone-curlew
Black-fronted dotterel
Crested pigeon
Spinifex pigeon
Diamond dove
Peaceful dove
Galah
Little corella
Cockatiel
Australian ringneck
Budgerigar
Horsfield's bronze cuckoo
Pheasant coucal
Barking owl
Barn owl
Southern boobook
Tawny frogmouth
Spotted nightjar
Australian owl-nightjar
Blue-winged kookaburra
Red-backed kingfisher
Sacred kingfisher
Rainbow bee-eater
Black-tailed tree-creeper
Variegated fairy-wren
White-winged fairy-wren
Rufous-crowned emu-wren
Yellow-rumped thornbill
Yellow-throated miner
White-plumed honeyeater
Golden-backed honeyeater

Grey-headed honey-eater
Brown honeyeater
Singing honeyeater
Crimson chat
Grey-crowned babbler
Rufous whistler
Grey shrike-thrush
Magpie lark
Willy wagtail
Black-faced cuckoo-shrike
White-winged triller
Little woodswallow
Pied butcherbird
Australian magpie
Torresian crow
Richard's Pippit
Zebra finch
Crimson firetail finch
Mistletoe bird
Welcome swallow
Tree martin
Fairy martin
Spinifex bird

FLORA OF THE MEENTHEENA
CONSERVATION PARK

The Meentheena Conservation Park is located in the Pilbara Biogeographical Region of northern Western Australia. The bioregion conforms to the boundaries of Beard's (1975) Fortescue Botanical District. This natural region is characterised by extensive plains and mountainous rugged ranges with generally shallow, skeletal stony soils which support vegetation dominated by tree and shrub communities that chiefly comprise emergent eucalypts and acacias over spinifex (*Triodia*) grasses. The distribution of the flora and vegetation in the region is strongly determined by climatic influences, in particular rainfall, together with geological and edaphic (soil) considerations. These influences promote a diverse landscape mosaic of vegetation types and a surprisingly species-rich flora for such an arid area. Another strong selective force influencing floristic distribution and the arrangement of vegetation across the landscape is fire, particularly in relation to the burn history of an area.

The flora of the Meentheena Conservation Park was poorly known prior to the governmental acquisition of the pastoral lease in April 1999. At the time of acquisition only 89 plant species were recorded from the station. Most of these species had been collected in the 1990s by staff in the Rangeland Survey team from the Department of Agriculture or by well-known volunteers Daphne Edinger and Gilbert Marsh. The flora list for the Park was augmented during the May 2000 Meentheena LANDSCOPE Expedition by the addition of 197 species culminating in a flora of 286 species. This number is somewhat below expectations for such an area given florist richness estimates for other localities in northern arid Western Australia (Table 1). Using simple regression analysis procedures a flora in the vicinity of 430-460 species would be within expectations for an area the size of Meentheena.

Clearly, additional survey work is required in the Park to increase our botanical knowledge and

Table 1 Known plant species richness of various study areas within the Pilbara.

Locality	Area (km ²)	No. of species	Species/km ²	Authority
Mining Area C - Hamersley Range	560	422	753.6	<i>ecologia</i> 1997
Barlee Range Nature Reserve	1045	515	492.8	van Leeuwen, unpublished
Kennedy Range National Park	1416	314	221.8	Keighery <i>et al.</i> 2000
Cape Range Peninsula	2185	630	288.3	Keighery and Gibson 1993
Meentheena Cons. Park (2001)	2387	331	138.7	van Leeuwen, unpublished
Meentheena Cons. Park (pre 2001)	2387	286	119.8	van Leeuwen, unpublished
Karijini National Park	6274	800	127.5	Trudgen and Casson 1998
Kintyre Study area	7500	409	54.5	Hart, Simpson & Associates 1993
Southern Carnarvon Basin	75000	2133	28.4	Keighery <i>et al.</i> 2000
Pilbara Biogeographical Region	179305	1900	10.6	van Leeuwen, unpublished

appreciation of the flora. Similarly, it is apparent that the flora occurring within large areas of the Park had not been documented, as previous survey efforts had primarily been confined to the alluvial plain of the Nullagine River towards the centre of the Park and the associated rough basaltic, doleritic and sandstone terrain slightly to the west of this imposing drainage line (Figure 1). Some collecting has also occurred along the Ripon Hills Road and limited botanical collecting has occurred to the north-west and on the south-eastern side of the Park, which are characterised by granitic plains. Similarly, no botanical surveys have been undertaken to the north-east, which harbours extensive highly dissected basaltic, silcrete and doleritic plateaux and plains.

As already mentioned, fire is a significant force that influences the distribution of plants and vegetation types

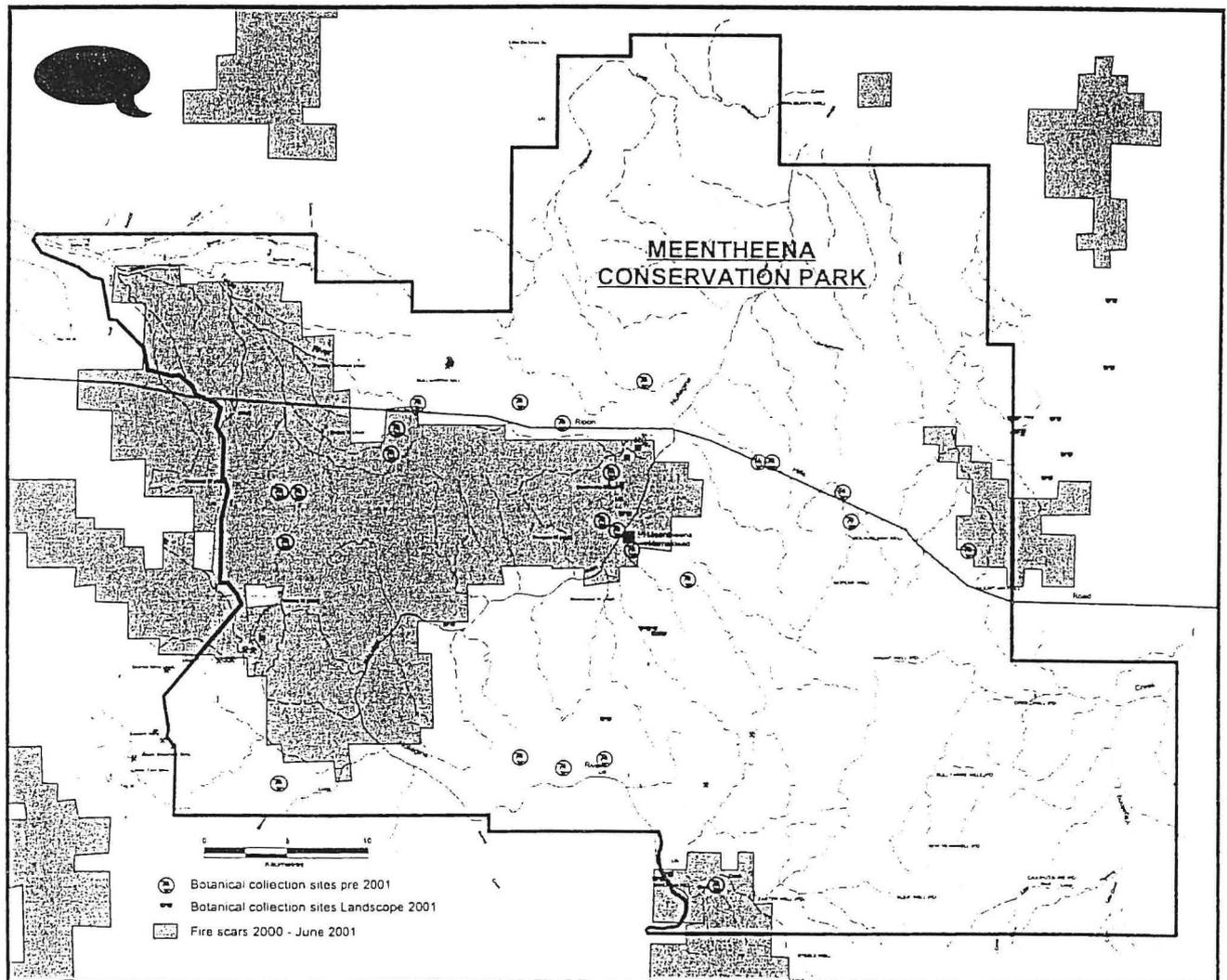


Figure 1 Location of botanical collecting sites and 2000-2001 burn scars in the Meentheena Conservation Park.

across the Pilbara. It is well documented in many arid zones that plants respond differently to fire depending on various life history strategies (e.g. seeders vs resprouters). A fire ephemeral life history is one such strategy that has important implications when documenting the flora of an area like Meentheena. This strategy describes plants, primarily annuals or short-lived perennials, which thrive in the post-burn environment (or after similar disturbances) and persist for a few years thereafter gradually disappearing from the regenerating vegetation community as seral progression towards a climax community occurs. Explanations for the proliferation of such plants are associated with reduced competition for light and nutrient resources along with physiological considerations such as seed dormancy mechanisms. Obviously, such life history strategies and responses to fire must be considered before the process of developing a comprehensive flora list can be deemed complete. A great opportunity therefore exists to document the fire ephemeral flora of the Meentheena Conservation Park as a consequence of large fires which raised over 51 960 ha (22%) of the Park during the 2000-2001 fire season.

Consequently, the botanical aim of the 2001 Meentheena LANDSCOPE Expedition was to augment the flora list for the Park. This was to be accomplished by three strategies, namely through:

- Revisiting sites which had been sampled in 2000 to document any new plants, particularly ephemeral species that may have responded to wet season rainfall;
- Sampling burnt habitats to document fire responsive ephemeral plants; and
- Visiting new areas of the Park, such as the Ripon Hills, to document previously unrecorded species in the Park.

Methods

During the Expedition, plant species present on Meentheena were recorded using an opportunistic sampling regime. Indeed, flora sampling was entirely opportunistic and comprised expeditioners and leaders collecting samples as they visited fauna sampling grids and explored the Park. Specimens were processed in the field and pressed in conventional herbarium plant presses for drying under ambient conditions. Details of habit, abundance, locality, habitat, vegetation type and associated species were recorded for each collected specimen. Sufficient material was collected from each sample to facilitate the lodgement of voucher specimens in the Western Australian Herbarium (PERTH), Pilbara Regional Herbarium (KARR) and the Australian National Herbarium (CANB). Upon return to the office, specimens were identified, databased and mounted ready for incorporation into the appropriate collections. Specimen identification was performed with reference to standard published floras applicable to the Pilbara (e.g. Jessop 1981; Wheeler *et al.* 1992), generic taxonomic treatments (e.g. Halford 1996; Grimes 1997) or through liaison with taxonomists at the PERTH and Eastern States' herbaria.

The classification of plants presented in this report conforms to that currently employed by the Western Australian Herbarium as portrayed in Paczkowska and Chapman (2000).

Results and Discussion

Fulfilment of the botanical aim of the 2001 Expedition was somewhat hindered by a lack of rainfall during the 2000/01 wet season. The rainfall at Marble Bar, the closest recording station to Meentheena, during the 2000/01 wet season was approximately 130 mm below the average of 360 mm, while that recorded over the first six months of 2001 was approximately 75 per cent below average. Clearly the ability to detect and record annual and ephemeral taxa, including fire ephemerals was severely impeded by this lack of rainfall.

Nevertheless, 128 specimens were collected during the expedition from 17 localities around the Meentheena Conservation Park. Excluding collections from outside the Park, which were all made in the Ripon Hills, a total of 72 species were represented by the 128 specimens. These 72 species represented 32 families and 52 genera. Forty-eight of the plants collected during the expedition were new records for the Park (Table 2).

Combining the new records obtained during the 2001 Expedition with records obtained during the previous 2000 Landscape Expedition (197 species) and historical records obtained from the Western Australian Herbarium and Agriculture WA, 330 species are now known to occur in the Park (Table 2). These species represent 133 genera from 53 families. The 2001 Expedition has resulted in the inclusion of plants from an additional 15 genera and six families to the flora list for the Park.

Table 2. Plants recorded from the Meentheena Conservation Park. Names in bold and underlined are new records for the Park recorded during the May 2001 Landscape Expedition (* = non-native species, P2 = conservation status).

ADIANTACEAE

Cheilanthes sieberi
Cheilanthes brownii

TYPHACEAE

Typha domingensis

POACEAE

Amphipogon strictus

Aristida contorta

Aristida holathera

Aristida sp. (SVL 4533)

**Cenchrus ciliaris*

**Cenchrus setigerus*

Chrysopogon fallax

Cymbopogon ambiguus

Dactyloctenium radulans

***Dicanthium* sp. (SVL 4820)**

Digitaria sp.

Erneapogon caerulescens

Erneapogon polyphyllus

Erneapogon sp.

Eragrostis cumingii

Eragrostis pergracilis

Eragrostis setifolia

Eragrostis tenellula

Eragrostis sp.

Eriachne aristidea

Eriachne benthamii

Eriachne helmsii

Eriachne ovata

Eriachne pulchella subsp. *dominii*

Eriachne sp. (SVL 4484)

Eriachne sp. (SVL 4580)

Iseilema membranaceum

Paspalidium rarum

Perotis rara

Setaria dielsii

Sorghum sp. (SVL 4528a)

***Sorghum* sp (SVL 4817)**

Sporobolus australasicus

Themeda triandra

Themeda sp. (SVL 4536)

Triodia angusta

Triodia epactia

Triodia lanigera

Triodia longiceps

Triodia pungens

Triodia wiseana

Yakirra australiensis

Genus sp. (SVL 4504)

Genus sp. (SVL 4507)

Genus sp. (SVL 4567)

Genus sp. (SVL 4571)

Genus sp. (SVL 4766)

Genus sp. (SVL 4779)

Genus sp. (SVL 4820)

Genus sp. (SVL 4821)

CYPERACEAE

Bulbostylis burbidgeae

Cyperus cunninghamii

Cyperus vaginatus

Cyperus sp. (SVL 4511)

Cyperus sp. (SVL 4575)

Cyperus sp. (SVL 4564)

Cyperus sp. (SVL 4782)

Cyperus sp. (SVL 4784)

Cyperus sp. (SVL 4790)

Eleocharis sp. (SVL 4789)

COMMELINACEAE

Commelina ensifolia

MORACEAE

Ficus opposita var. *indecora*

Ficus brachypoda

PROTEACEAE

Grevillea pyramidalis

Grevillea wickhamii subsp. *aprica*

Hakea lorea

SANTALACEAE

Santalum lanceolatum

CHENOPODIACEAE

Dysphania kalpari

Dysphania rhadinostachya

Enchylaena tomentosa

Salsola tragus

Sclerolaena sp. (SVL 4569)

AMARANTHACEAE

Achyranthes aspera

**Aerva javanica*

Alternanthera nana

Alternanthera nodiflora

Amaranthus mitchellii

Gomphrena affinis

Gomphrena canescens

Gomphrena cunninghamii

Ptilotus aevroides

Ptilotus appendiculatus

Ptilotus astrolasius

Ptilotus auriculifolius

Ptilotus axillaris

Ptilotus calostachyus

Ptilotus carinatus

Ptilotus exaltatus

Ptilotus fusiformis

Ptilotus helipteroides

Ptilotus mollis P2

Ptilotus sp. (SVL 4542)

NYCTAGINACEAE

Boerhavia coccinea

Boerhavia gardneri

Boerhavia schomburgkiana

AIZOACEAE

Trianthema cussackiana

Trianthema glossostigma

Trianthema oxycalyptra

Trianthema pilosa

Trianthema portulacastrum

Trianthema turgidifolia

Trianthema sp.

MOLLUGINACEAE

*Glinus oppositifolius**Mollugo molluginis*

PORTULACACEAE

Calandrinia sp. (SVL 4780)*Portulaca oleracea*

CARYOPHYLLACEAE

*Polycarpaea breviflora**Polycarpaea corymbosa**Polycarpaea holtzei**Polycarpaea longiflora*

MENISPERMACACEAE

Tinospora smilacina

PAPAVERACEAE

**Argemone ochroleuca*

CAPPARACEAE

Cleome viscosa

DROSERACEAE

Drosera indica

MIMOSACEAE

*Acacia ampliceps**Acacia ancistrocarpa**Acacia arida**Acacia bivenosa**Acacia coriacea* subsp. *pendens**Acacia cowleana**Acacia eriopoda**Acacia exilis**Acacia farnesiana**Acacia gregorii**Acacia hilliana**Acacia inaequilatera**Acacia maitlandii**Acacia ptychophylla**Acacia pyrifolia**Acacia retivenia* subsp. *clandestina**Acacia spondylophylla**Acacia sclerosperma**Acacia tetragonophylla**Acacia trachycarpa**Acacia tumida**Acacia victoriae**Dichrostachys spicata*

CAESALPINIACEAE

*Petalostylis labicheoides**Senna artemisioides* subsp. *helmsii**Senna artemisioides* subsp. *oligophylla**Senna glutinosa* subsp. *glutinosa**Senna glutinosa* subsp. *x luerssenii**Senna glutinosa* subsp. *pruinosa**Senna notabilis**Senna symonii**Senna venusta*

PAPILIONACEAE

*Alysicarpus rugosus**Cajanus pubescens**Crotalaria crispata**Crotalaria cunninghamii**Crotalaria medicaginea**Cullen leucochaites**Cullen leucanthum**Cullen martinii**Cullen pogonocarpum**Cullen stipulaceum**Cullen* sp.*Desmodium filiforme**Glycine tabacina**Glycine* sp. (SVL 4806)*Indigofera colutea**Indigofera linifolia**Indigofera linnaei**Indigofera monophylla**Indigofera rugosa**Indigofera trita**Lotus australis**Rhynchosia minima**Sesbania cannabina**Sesbania formosa**Swainsona decurrens**Swainsona formosa**Swainsona kingii**Swainsona pterostylis**Swainsona stenodonta**Templetonia egena**Tephrosia bidwillii**Tephrosia* sp. Bungaroo Creek (Met 11601)*Tephrosia* sp. 1*Tephrosia* sp. 2*Tephrosia* sp. (SVL 4799)*Tephrosia* sp. (SVL 4846)*Vigna lanceolata**Zornia albiflora*

ZYGOPHYLLACEAE

*Tribulus hirsutus**Tribulus macrocarpus**Tribulus occidentalis**Tribulus platypterus**Tribulus suberosus*

POLYGALACEAE

Polygala isingii

EUPHORBIACEAE

*Euphorbia australis**Euphorbia coghlanii**Euphorbia drummondii**Flueggea virosa* subsp. *melaethesoides**Leptopus decaisnei**Phyllanthus lacunellus**Phyllanthus maderaspatensis*

STACKHOUSIACEAE

Stackhousia sp. (SVL 4837)

SAPINDACEAE

Atalaya hemiglauc

TILIACEAE

*Corchorus aestuans**Corchorus fascicularis**Corchorus laniflorus**Corchorus tridens**Corchorus walcottii**Corchorus* sp. (SVL 4512)*Corchorus* sp. (SVL 4525)*Corchorus* sp. (SVL 4537)

Triumfetta appendiculata

Triumfetta chaetocarpa
Triumfetta maconochieana
Triumfetta plumigera
Triumfetta propinqua

Triumfetta sp. (SVL 4830)

Triumfetta sp. (SVL 4841a)

Triumfetta sp. (SVL 4841b)

MALVACEAE

Abutilon fraseri

Abutilon lepidum

Abutilon sp. (SVL 4829)

Gossypium australe

Hibiscus brachychlaenus

Hibiscus burtonii

Hibiscus coatesii

Hibiscus leptocladus

Hibiscus panduriformis

Hibiscus sturtii

Sida echinocarpa

Sida rohlena

Sida sp. (SVL 4502)

Sida sp. (SVL 4517)

Sida sp. (SVL 4518)

Sida sp. (SVL 4520)

Sida sp. (SVL 4545)

Sida sp. (SVL 4550)

Sida sp. (SVL 4835)

STERCULIACEAE

Waltheria indica

Waltheria virgata

LYTHRACEAE

Ammannia baccifera

COMBRETACEAE

Terminalia canescens

MYRTACEAE

Corymbia candida subsp. dipsodes

Corymbia ferritcola

Corymbia hamersleyana

Eucalyptus camaldulensis

Eucalyptus gamophylla

Eucalyptus leucophloia

Eucalyptus odontocarpa

Eucalyptus victrix

Melaleuca argentea

Melaleuca glomerata

HALORAGACEAE

Myriophyllum verrucosum

APIACEAE

Trachymene oleracea

OLEACEAE

Jasminum didymum

APOCYNACEAE

Carissa lanceolata

ASCLEPIADACEAE

Cynanchum floribundum

CONVOLVULACEAE

Bonamia pannosa

Bonamia rosea

Convolvulus erubescens

Evolvulus alsinoides

Jacquemontia pannosa

Ipomoea lonchophylla

Ipomoea muelleri

Ipomoea sp. (SVL 4811)

Polymeria calycina

Polymeria sp. (SVL 4491)

Polymeria sp. (SVL 4560)

BORAGINACEAE

Heliotropium aff. crispatum

Heliotropium heteranthum

Heliotropium inexplicitum

Heliotropium murinum

Heliotropium ovalifolium

Heliotropium sp. (SVL 4833)

Trichodesma zeylanicum

VERBENACEAE

Clerodendrum floribundum

SOLANACEAE

**Datura leichhardtii*

Nicotiana benthamiana

Nicotiana occidentalis

Nicotiana rosulata

**Physalis minima*

Solanum diversiflorum

Solanum horridum

Solanum lasiophyllum

Solanum sp. (SVL 4568)

SCROPHULARIACEAE

Peplidium sp. (SVL 4572)

Peplidium sp. (SVL 4816)

Stemodia grossa

Stemodia viscosa

Striga squamigera

BIGNONIACEAE

Genus sp. (SVL 4538)

PEDALIACEAE

Josephinia sp. Mt Edgar Stn (NT Burbidge 1194)

MYOPORACEAE

Eremophila latrobei

Eremophila longifolia

Eremophila sp.

RUBIACEAE

Oldenlandia crouchiana

Synaptantha tillaeacea

CUCURBITACEAE

**Cucumis melo*

Cucumis sp. (SVL 4822)

Mukia maderaspatana

CAMPANULACEAE

Wahlenbergia tumidifructa

LOBELIACEAE

Lobelia quadrangularis

GOODENIACEAE

Dampiera candidans

Goodenia heterochila

Goodenia lamprosperma

Goodenia micrantha

Goodenia microptera

Goodenia stobbsiana

Goodenia triodiophila

Scaevola amblyanthera

Scaevola sp.

STYLIDIACEAE

Stylidium desertorum

Stylidium fluminense

ASTERACEAE

*Centipeda minima**Centipeda* sp. (SVL 4559)*Chrysogonum trichodesmoides**Flaveria australasica**Ixiochlamys cuneifolia**Ixiochlamys* sp. (SVL 4523)*Olearia* sp.*Pentalepis trichodesmoides**Pluchea tetranthera**Pteracaulon serrulatum**Pterocaulon sphacelatum**Senecio* aff. *leucoglossus**Streptoglossa adscendens**Streptoglossa bubakii**Streptoglossa odora*

Genus sp. (SVL 4483)

Genus sp. (SVL 4522)

Genus sp. (SVL 4565)

Most of the plants recorded at Meentheena are typical, ubiquitous species found throughout the Pilbara. The grass family (Poaceae) with 50 species was the richest recorded, a feature typical of most Pilbara study areas. Twenty-two families were represented by only one species. Other common elements of the flora were peas (Papilionaceae), wattles (Mimosaceae), mulla mullas (Amaranthaceae) and daisies (Asteraceae) with 38, 23, 20 and 18 species respectively. By far the most visually conspicuous plants on Meentheena were regenerating spinifex (*Triodia*) and wattles (*Acacia*) which were conspicuous in all habitats with six and 20 species, respectively. Other conspicuous plants were the re-sprouting emergent eucalypts, especially the river red gums (*Eucalyptus camaldulensis*) which fringed the Nullagine River, and the white-barked snappy gums (*Eucalyptus leucophloia*) which stylishly graced the slopes of most hills. The tall majestic paperbarks (*Melaleuca argentea*) bordering most of the pools along the Nullagine River together with the white dragon tree or corkwood (*Sesbania formosa*) were also a conspicuous component of the flora.

Most plants recorded at Meentheena have a ubiquitous distribution throughout the Pilbara and much of the arid inland regions of central Western Australia. However, two of the plants recorded in the Park, one for the first time during this expedition, are of conservation interest. These plants are *Josephinia* sp. 'Mt Edgar Stn.' (N.T. Burbidge 1194) and *Ptilotus mollis*, as described below:

Josephinia sp. 'Mt Edgar Stn.' (N.T. Burbidge 1194): This undescribed species is known from six collections all obtained from the Mt Edgar-Meentheena area. The species is currently not listed on CALM's Priority Flora List. The species was collected from three localities during the expedition. All localities were along the Nullagine River on alluvial wash areas close to the river in areas that had recently been burnt. This species is now known from five localities on Meentheena.

Ptilotus mollis: This species is listed on CALM's Declared Rare and Priority Flora List as a Priority 2 taxon. This designation implies that the species is known from one or a few (<5) populations, at least some of which are not believed to be under immediate threat. The species is under urgent consideration for addition to the Schedule of Declared

Rare Flora but requires further survey to fulfil stringent survey conditions before addition to the schedule can be considered. This species has previously been collected from four localities in the inland Pilbara, from south-east of Marble Bar at the Warrawoona Mining Centre; in the Rudall River area; on the footslopes of Mt Bruce in the Hamersley Range and west of Marble Bar in the Gorge Range. During the expedition this species was collected at the base of a breakaway near the Ripon Hills sink-hole. The species was also recorded from the Ripon Hills Mining Centre, which is outside the Park.

Other plants of botanical interest recorded during the Expedition include:

Triumfetta plumigera: This tall (1.5 m) upright plant with small hairy burr-like fruit was collected from the access track to the Ripon Hills sink-hole. Suggestions made by SVL at the time indicated that this species was possibly new, having not previously been reported in the scientific literature. While these comments proved incorrect the species is a new record for the Pilbara and this collecting locality represents the first for the species outside the Kimberley region in Western Australia. The Ripon Hills population also represents the most southern known for the species, which typically has a distribution across semi-tropical northern Australia. The Ripon Hills population is 370 km south on the next nearest population, which is located in the southern Edgar Ranges. The Ripon Hills population represents a significant disjunct outlier population for this species.

Triumfetta appendiculata: This shrub was collected from the banks of the Nullagine River below Baroona Hill. This population is the most eastern recorded for the species, which has a distribution that is typically centred on the west Pilbara coastline and inland to the Hamersley Ranges.

Templetonia egena: This broom-bush shrub, which grows up to 2 m tall, was collected from the plateau adjacent to the Ripon Hills sink-hole. This population represents a significant north-westerly range extension for the species, which has a sporadic distribution throughout the southern rangelands and desert regions of Western Australia. The Ripon Hills population is the second recorded from the Pilbara Biogeographical Region.

Eucalyptus odontocarpa: The mallee was observed several times along the access track to the Ripon Hills Mining Centre and thereafter collected along the track to the Ripon Hills sink-hole. These populations represent a slight westerly extension of the distributional range of the species, which previously was delimited by the Oakover River, east of Meentheena.

Seven non-native plant species have been recorded on the Meentheena Conservation Park (Table 2). Two of these were added during the 2001 Expedition. These non-native species are buffel grass (*Cenchrus ciliaris*), birdwood grass (*Cenchrus setigerus*), kapok bush (*Aerva javanica*), Mexican poppy (*Argemone ochroleuca*), thornapple (*Datura leichhardtii*), ulcardo melon (*Cucumis melo*) and wild gooseberry (*Physalis minima*). Mexican poppy and the ulcardo melon were recorded during the most recent survey. A few plants with cosmopolitan distributions throughout the Southern Hemisphere were also recorded on Meentheena. These include prickly saltwort (*Salsola tragus*), purslane (*Portulaca oleracea*) and mimosa bush (*Acacia farnesiana*).

Further botanical survey research is required in the Meentheena Conservation Park to comprehensively document the flora. The current flora list of 330 species is still below expectations for an area of this size in north-western Australia (Table 1). Examination of

the flora list for the Park suggests that it is currently depauperate in species representative of the Brassicaceae, Euphorbiaceae, Goodeniaceae, Papilionaceae, Poaceae and Solanaceae. As many of the presumed missing representatives from these families are annual and ephemeral species, planning future botanical surveys after sufficient rainfall and in spring would be a profitable strategy. Similarly, the sampling of burnt habitats after sufficient rainfall should be pursued, as should the documentation of the flora in the northern and western part of the Park as well as in the vicinity of Yilgalong Creek.

Stephen van Leeuwen and Bob Bromilow