

Native plants and common weeds of the Hunter catchment

Introduction

A guide to Hunter flora

The Hunter catchment has a very diverse and species-rich flora, occurring across a wide variety of vegetation landscapes (see page 8). It's probable that up to 2500 native plant species, or some 42% of the native plants known to occur in New South Wales, are found in the Hunter catchment. This species richness has largely resulted from the direct link that the Hunter Valley creates between coastal and inland New South Wales, allowing for the movement, over millennia, of plant species between the coast and inland. Unfortunately, the Hunter is also rich in weed flora, most likely due to the early European settlement of the region, and the degree to which the landscape has been modified for agriculture, industry and urban living.

These appendices have been developed to provide a basic guide to the flora of the Hunter catchment. They include lists of the common or characteristic native plants and weeds of the Hunter catchment, categorised by the vegetation landscapes in which they are known to occur.

Developing species lists

The appendices have been developed through a comprehensive review of recent vegetation survey reports from the Hunter catchment and some from outside the catchment (e.g. Port Stephens). Information reviewed includes government reports, consultancy reports, independent biodiversity lists and university or research project reports. In each instance the available species lists and vegetation community descriptions were reviewed, and the most common or characteristic species were selected for inclusion in these species lists. Because this information was compiled from a literature review and not based on quantitative data, there are likely to be inconsistencies between what is here regarded as common and characteristic, compared with the views of the authors of the original reports. As a result, the lists presented here are to be used as guides only.

Information on the habit, growth form and environment of each species was largely sourced from Harden (1990, 1992, 1993, 2002), and Harden and Murray (2000), or otherwise is based on the author's knowledge. Table 4 on page 100 provides a summary of the reports assessed in the compilation of these species lists.

The purpose of the lists

The purpose of the native plants list is to provide much-needed information to landholders, bush regenerators and researchers on what native plants grow where in the Hunter catchment. Although the list is not a 'planting list' and should not be used as such, it should provide a useful first step when deciding what species to plant for any planting project, whether it be a small-scale planting around a house, or a large-scale revegetation project. The list also provides an indication of the various plant species that are likely to occur in your local area, assisting with any vegetation surveys you may conduct. The list could also be used by consultants, agencies, councils and naturalists to develop native plant lists for particular local government areas or vegetation landscapes.

The weed species list is designed to provide information on the most common and characteristic weed species in the Hunter catchment. This information should be useful when undertaking plant-

ing projects or when attempting to identify the weeds occurring within a specific area. The list will be of use to consultants, agencies, councils and naturalists for developing weed species lists for local government areas or vegetation landscapes.

Table 4: Reports used to compile the appendices.

Author(s)	Subject	Date
Bell	<i>Tomaree National Park Vegetation Survey</i>	1997
Bell	<i>Vegetation Survey and Mapping of Crown Land, South of Manobalai Nature Reserve, Upper Hunter Valley</i>	1997
Bell	<i>Vegetation Survey of Wollemi National Park: A Fire Management Document (Volumes 1 & 2)</i>	1998
Bell & Murray	<i>The Ecological Significance of Bow Wow Creek Gorge, Mulbring, Hunter Valley, New South Wales</i>	2001
Bell, Vollmer & Gellie	<i>Yengo National Park and Parr State Recreation Area. Vegetation Survey for Use in Fire Management</i>	1993
Binns	<i>Flora Survey, Morisset Forestry District, Central Region, New South Wales</i>	1996
Binns	<i>Floristics and Vegetation Patterns of Coolah Tops, New South Wales</i>	1997
Fallding, Bell & Murray	<i>Myambat Vegetation and Fauna Management: Guidelines for Landscape Management at the Myambat Logistics Company Site</i>	1999
Floyd	<i>Dry Rainforest Outliers, Dungog–Maitland</i>	1983
Floyd	<i>Rainforests of Wollemi and Goulburn River National Parks</i>	1984
Giles	<i>The Vegetation of the Paterson River Valley: A Survey of the Current Distribution of Canopy Species, a Reconstruction of the Original Distribution, and Proposals for Revegetation and Rehabilitation</i>	1995
Greenwood	<i>Dungog Vegetation and Biodiversity Study</i>	1999
Hill	<i>Goulburn River National Park and Munghorn Gap Nature Reserve: Vegetation Survey for Fire Management Purposes (Volumes 1 & 2)</i>	1999 & 2000
Hill, Peake, Bell and Raine	<i>The Vegetation of Towarri National Park, and Wingen Maid and Cedar Brush Nature Reserves</i>	2001
McNair	<i>Flora of Port Stephens and Myall Lakes Region New South Wales</i>	1992
McRae & Cooper	<i>Vegetation of the Merriwa Area, New South Wales</i>	1985
Peake	<i>The Vegetation of Manobalai Nature Reserve</i>	1999
Peake	<i>The Vegetation of the Mid-Hunter Valley: A Report on the Findings of the Hunter Remnant Vegetation Project</i>	forth-coming
Rodd & Clements	<i>Flora Survey of Remnant Bushland Patches in Newcastle Local Government Area</i>	1994
Thomas	<i>Vegetation Communities of the Singleton Military Area</i>	1998
Turner & Vernon	<i>Rainforest Stands Between Barrington Tops and the Hunter River, New South Wales</i>	1994
WBM Oceanics Australia	<i>Environmental Impact Statement for the Rehabilitation of Hexham Swamp</i>	2000
Zoete	<i>Vegetation Survey of Barrington Tops and Mount Royal National Parks for Use in Fire Management</i>	1998

Understanding the terminology used

Following is a description of the categories used in the species lists, including explanations of some semi-technical terms used to ensure the information is concise and relevant:

Scientific name: This is the botanical name (in Latin and/or Greek) that is used to describe an individual plant species. It is made up of the genus name, always capitalised, and the species name, always in lower case. Both genus and species are italicised. The scientific name provided is the most recent name used by the NSW National Herbarium in Sydney. If the species name has changed in recent years, the name used here may be different to your own references. See 'Synonym' below.

Family: Each plant genus (plural: genera) belongs to a family of related genera. These related genera belong to a higher-order category termed the 'family'. The family name used here is the most recent name used by the NSW National Herbarium in Sydney.

Common name: This is the name frequently used to describe the plant species in everyday language. Some common names are used for more than one plant species (some are used for many species), and so many plant species share the same common name. It is for this reason, in part, that the system of using Latin and Greek bi-nomial names was developed. However, common names are useful for discussing a species with non-scientific audiences, and often provide important local information. The names used here are those used in Harden (1990, 1992, 1993, 2002), Harden and Murray (2000), or are from other contemporary botanical literature sources.

Synonym: This is a previously-used name for a species, which has been replaced by a newly accepted name. An example is *Corymbia maculata* (spotted gum), which was formerly named *Eucalyptus maculata* until a revision in 1995 split the *Eucalyptus* genus into two genera.

Native: A native plant is considered to be one that occurred naturally in the specified region prior to European settlement.

Introduced: An introduced plant is considered to be one that did not occur naturally in the specified region prior to European settlement. Therefore, species that are now naturalised but formerly from other areas in Australia or throughout the world, are considered to be introduced.

Weed types: Weed types have been sorted into four categories in the weed species list. Many weeds are relevant to more than one category.

Noxious: These are weeds that are formally listed under NSW's *Noxious Weeds Act 1993*.

Environmental: These weeds pose a threat to the environment and ecology of the Hunter catchment. Typically, they are invasive weeds that will modify the structure and composition of remnant vegetation, and may lead to local extinctions of plant and animal species.

Agricultural: These weeds pose a threat to agricultural enterprises, such as cropping, grazing and dairying practices. Some may poison stock, others might take over otherwise productive pastures, while others might cause injury to stock through thistles or burrs.

Amenity: These weeds affect human aesthetics, for example garden weeds and lawn weeds, or may affect human health.

Environment and habitat: This section provides brief information on the environmental setting in which the species grows, in particular the habitat in which it is typically found. Habitats are specific ecological conditions in which a species is usually found, for example, rainforest, sand dunes, river banks and cliff ledges.

Habit, growth form and life cycle: The habit of a plant species is the way in which it typically grows, such as whether it is erect, creeping or ascending. A plant's growth form is simply whether it is a tree, shrub, herb, rush, fern etc., and to what height it grows. Its life cycle is the duration for which it grows, being perennial, annual or living for an intermediate time period (such as biennial or ephemeral).

Distribution: The distribution column broadly documents the occurrence of the species within the Hunter catchment. For each species, individual local government areas (LGAs) where it is known to occur are listed in columns next to the distributional description. The species lists are divided into the eight broad vegetation landscapes mapped for the Hunter catchment, as seen in the map on page 11.

Significance: Any high ecological or conservation significance is noted in the ecological significance column. National significance codes are taken from the list of Rare or Threatened Australian Plants (ROTAP), which does not have any legal status (Briggs & Leigh 1996). The state significance codes are taken from the Schedules of the *Threatened Species Conservation Act 1995*, and have legal status. The regional significance codes are taken from the draft list of Regionally Significant Plants for the Hunter Region (Bell et al. forthcoming), which has no legal status. Table 5 (over) lists the codes that have been used:

Table 5: Codes used to indicate significance in the appendices.

Code	Significance
<i>National Significance (no legal status)</i>	
ROTAP	listed on the Rare or Threatened Australian Plants (ROTAP) database (Briggs & Leigh 1996)
<i>State Significance (legally protected)</i>	
TSC-V	listed as Vulnerable on NSW's <i>Threatened Species Conservation Act 1995</i>
<i>Regional Significance (no legal status) (from Bell et al. (forthcoming))</i>	
Da	disjunct occurrence in the Hunter catchment (populations of the species in the Hunter catchment are disconnected to those outside of the Hunter), with the species occurring in rare or localised aggregations in the catchment
Db	disjunct occurrence in the Hunter catchment, but is otherwise common and widespread in the catchment
L	endemic to the Hunter catchment (only grows in that region)
N/E/S/W	the northern (N), eastern (E), southern (S) or western (W) distributional limit of the species' range occurs in the Hunter catchment
R	the species is considered to be rare in the Hunter catchment
T	the species is considered to be threatened in the Hunter catchment
<i>Note:</i>	<i>? is used to indicate that a code is possible rather than certain</i>

Using the species lists

To use the plant species appendices, first refer to the Hunter Catchment Vegetation Landscapes map on page 11. Determine which vegetation landscape your site or property occurs within, as well as the relevant local government area. Then, search down the list within the appropriate vegetation landscape to see which species occur within your local government area. For each vegetation landscape the list is divided into different growth forms, such as trees, shrubs, grasses and herbs.

Once a site has been selected for planting, the native plant species list can be used to determine:

- which plant species may have once grown on the site
- which plant species may grow in the local area
- which plant species might be suitable for planting on the site

You can also use the native plant species list to develop a planting list for any revegetation project you have in mind and then use the list to order seed or tubestock from your local nursery. This will ensure that you plant species which naturally grow in your local area.

The list may also help to identify plants if you undertake a vegetation survey on your own property or anywhere else in the Hunter catchment.

The weed species list has been developed primarily to be used as a checklist by landholders, Landcarers, bush regenerators or anyone undertaking a plant survey or rehabilitation project. The list provides a useful summary of the more common or characteristic weed species likely to occur in your area and those which may possibly invade planting projects.

Seeking further advice

The material presented here is not comprehensive and may be subject to error and inconsistency. It should therefore not be relied upon to provide a complete list of plants occurring within a specified area, nor should it be entirely relied upon to develop a species planting list. It should be used as a guide only, and further advice should always be sought for planting projects.

For further advice on plant species that occur in the Hunter catchment, refer to section D: Getting Help (page 83).

Appendix 2 / Introductory List of Common Weeds of the Hunter Catchment

A guide to the more common or significant weeds

Quick Finder

1 Coastal forests and heaths	161
2 Estuarine forests and saltmarsh	163
3 Flood-plain woodland and grassland	164
4 Forests and woodlands of the valley lowlands	166
5 Tall forests and rainforest of high elevation basalt plateaux and ranges	170
6 Open grassy woodland of the Merriwa Plateau	172
7 Forests of dissected sandstone plateaux and subcoastal sandstone hills	174
8 Fresh-water wetlands	175

Explanations

= synonym (i.e. alternative name for same plant species)

Code for weed types: N = Newcastle C = Cessnock

The list is arranged by the eight broad botanical landscapes which occur in the Hunter catchment (see map on page 11)

Scientific name	Family	Common name	Weed type						Environment and habitat in catchment	Habit and growth form	Distribution	Rylstone	Mudgee	Merriwa	Murrumbidgee	Stone	Muswellbrook	Singleton	Maitland	Dungog	Cessnock	Port Stephens	Newcastle
			Native	Introduced	Noxious	Environmental	Agricultural	Amenity															
1 COASTAL FORESTS AND HEATHS																							
TREES																							
<i>Cinnamomum camphora</i>	Lauraceae	camphor laurel	X	✓	X	✓	X	✓	coastal areas, esp. near rainforest areas	large tree	lower Hunter	X	X	X	X	X	X	✓	✓	✓	✓	✓	
<i>Erythrina x sykesii</i>	Fabaceae	coral tree	X	✓	X	X	X	X	cultivated near old habitations	deciduous tree to 15 m	lower Hunter, near and on the coast	X	X	X	X	X	X	X	X	X	X	✓	
<i>Ligustrum lucidum</i>	Oleaceae	large-leaved privet	X	✓	N	✓	X	✓	coastal rainforest & wet gullies	shrub or small tree to c. 10 m	lower Hunter and some upper Hunter urban areas	X	X	X	✓	✓	✓	✓	✓	✓	✓	✓	
<i>Ligustrum sinense</i>	Oleaceae	small-leaved privet	X	✓	N	✓	X	✓	margins of rainforest, along fence lines, cleared areas	shrub to c. 3 m	lower Hunter and some small occurrences in upper Hunter	X	X	X	✓	✓	✓	✓	✓	✓	✓	✓	
<i>Toxicodendron succedaneum</i>	Anacardiaceae	rhus tree	X	✓	✓	✓	X	✓		small to medium-sized tree 2–5 m	lower Hunter	X	X	X	X	X	X	X	X	X	✓	X	✓
SHRUBS																							
<i>Chrysanthemoides monilifera</i> ssp. <i>rotundata</i>	Asteraceae	bitou bush	X	✓	¹	✓	X	✓	disturbed coastal sites	erect shrub to 1.5 m	coastal areas	X	X	X	X	X	X	X	X	X	X	✓	✓
<i>Cotoneaster glaucophyllus</i>	Malaceae	cotoneaster	X	✓	X	✓	X	✓	widely cultivated	erect evergreen shrub 1 m or more	lower Hunter	X	X	X	X	X	X	X	X	X	X	X	✓
<i>Cotoneaster pannosus</i>	Malaceae	cotoneaster	X	✓	X	✓	X	✓	commonly cultivated	evergreen shrub 1–3 m	lower Hunter	X	X	X	X	X	X	X	X	X	X	X	✓
<i>Lantana camara</i>	Verbenaceae	lantana	X	✓	C	✓	✓	✓	sclerophyll forest & disturbed rainforest, coastal districts	shrub up to c. 3m	lower and mid-Hunter, slowly advancing west	X	X	X	X	X	✓	✓	✓	✓	✓	✓	✓
<i>Olea europaea</i> ssp. <i>cuspidata</i> = <i>O. europaea</i> ssp. <i>africana</i>	Oleaceae	African olive	X	✓	X	✓	✓	✓	invasive in disturbed sites, often roadsides, & some remnant bushland	tree 2–15 m	lower and mid-Hunter, isolated clumps in upper Hunter	X	X	X	X	✓	✓	✓	✓	✓	✓	✓	✓
<i>Olea europaea</i> ssp. <i>europaea</i>	Oleaceae	common olive	X	✓	X	✓	✓	✓	invasive in disturbed sites, often roadsides, & some remnant bushland	tree 2–15 m	lower and mid-Hunter, isolated clumps in upper Hunter	X	X	X	X	✓	✓	✓	✓	✓	✓	✓	✓
<i>Pyracantha crenulata</i>	Malaceae	pyracantha	X	✓	X	✓	X	✓	often cultivated, native of the Himalayas	shrub or small tree	lower Hunter	X	X	X	X	X	X	X	✓	✓	✓	✓	✓
<i>Rhaphiolepis indica</i>	Malaceae	Indian hawthorn	X	✓	X	✓	X	✓	cultivated as an ornamental, around old habitations	shrub 1–1.5 m	invading Newcastle and Merewether headlands	X	X	X	X	X	X	X	X	X	X	X	✓
<i>Solanum mauritanium</i>	Solanaceae	wild tobacco bush	X	✓	X	✓	X	✓	coastal areas, rainforest	shrub or small tree to 4 m	mostly lower and mid-Hunter, also upper Hunter	X	X	X	✓	✓	✓	✓	✓	✓	✓	✓	✓

¹ Newcastle/Port Stephens

Scientific name	Family	Common name	Weed type					Environment and habitat in catchment	Habit and growth form	Distribution	Bystone	Mudgee	Merrima	Murrumbidgee	Scenic	Muswellbrook	Singleton	Maitland	Dungog	Cessnock	Port Stephens	Newcastle
			Native	Introduced	Noxious	Environmental	Agricultural															
GRASSES																						
<i>Ammophila arenaria</i>	Poaceae	marram grass	×	✓	×	✓	×	×	coastal dunes	tufted perennial to 1.2 m	coastal areas south from Newcastle	×	×	×	×	×	×	×	×	×	×	✓
<i>Andropogon virginicus</i>	Poaceae	whisky grass	×	✓	×	✓	×	×	roadsides, disturbed ground	tufted erect perennial, culms to 1 m	throughout catchment	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
<i>Axonopus affinis</i>	Poaceae	narrow-leaved carpet grass	×	✓	×	✓	✓	✓	fallow pastures, alluvial soils	rhizomatous perennial to 0.5 m	lower Hunter	×	×	×	×	×	×	✓	✓	✓	✓	✓
<i>Briza maxima</i>	Poaceae	quaking grass	×	✓	×	✓	×	✓	disturbed areas	glabrous annual to 0.6 m	throughout catchment	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
<i>Chloris gayana</i>	Poaceae	Rhodes grass	×	✓	×	✓	✓	✓	pasture species invading roadsides & some remnant bushland	erect perennial to 1.2 m	throughout catchment	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
<i>Cortaderia seloana</i>	Poaceae	Pampas grass	×	✓	✓	✓	×	✓	mostly disturbed areas	large perennial, culms erect to 4 m	lower Hunter	×	×	×	×	×	×	✓	✓	✓	✓	✓
<i>Ehrharta erecta</i>	Poaceae	panic veldtgrass	×	✓	×	✓	×	×	moist, shady sites	tufted perennial to 0.6 m	lower and mid-Hunter	×	×	×	×	×	✓	✓	✓	✓	✓	✓
<i>Eleusine indica</i>	Poaceae	crowsfoot grass	×	✓	×	✓	✓	×	lawn, horticultural crop fields, disturbed areas	tufted perennial to 0.8 m	throughout catchment	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
<i>Eleusine tristachya</i>	Poaceae	goose grass	×	✓	×	✓	×	✓	weed of disturbed ground & extensive mown areas	tufted perennial to 0.4 m	throughout catchment	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
<i>Paspalum dilatatum</i>	Poaceae	paspalum	×	✓	×	✓	×	✓	pastures, lawns, disturbed areas	tufted perennial to 2 m	throughout catchment	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
<i>Pennisetum clandestinum</i>	Poaceae	kikuyu grass	×	✓	×	✓	×	✓	pastures, lawns, playing fields, gardens, roadsides	rhizomatous perennial to 0.9 m	throughout catchment	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
<i>Sporobolus africanus</i> = <i>S. indicus</i> var. <i>capensis</i>	Poaceae	Parramatta grass	×	✓	×	×	✓	×	disturbed areas, pastures	tufted perennial to 0.3–0.9 m	lower Hunter	×	×	×	×	×	×	✓	✓	✓	✓	✓
<i>Sporobolus fertilis</i> = <i>S. indicus</i> var. <i>major</i>	Poaceae	giant Parramatta grass	×	✓	✓	×	✓	×	disturbed areas, pastures	tufted perennial to 0.8–1.6 m	lower Hunter	×	×	×	×	×	×	✓	✓	✓	✓	✓
<i>Stenotaphrum secundatum</i>	Poaceae	buffalo grass	×	✓	×	✓	×	×	degraded areas	perennial grass to 0.3 m	lower Hunter, subcoastal areas	×	×	×	×	×	×	×	×	×	×	✓
SEDGES AND RUSHES																						
<i>Cyperus aggregatus</i>	Cyperaceae	sedge	×	✓	×	✓	×	×	sandy soils	tufted perennial, culms 5–60 cm	lower Hunter	×	×	×	×	×	×	✓	✓	✓	✓	✓
HERBS																						
<i>Alternanthera pungens</i>	Amaranthaceae	khaki weed	×	✓	×	✓	✓	✓	moist areas	prostrate perennial to 60 cm	mostly lower and mid-Hunter	×	×	✓	✓	✓	✓	✓	✓	✓	✓	✓
<i>Ambrosia tenuifolia</i>	Asteraceae	lacy ragweed	×	✓	×	✓	×	✓	roadsides, wastelands, creeks, channel banks	erect perennial herb to 75 cm	throughout catchment	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
<i>Arctotheca calendula</i>	Asteraceae	Cape weed	×	✓	×	✓	✓	×	weed of cultivation & pastures	stemless annual herb to 30 cm	throughout catchment	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
<i>Arctotheca populiifolia</i>	Asteraceae	beach daisy	×	✓	×	✓	×	×	pioneer on beach sand, front dunes with spinifex	perennial herb to 30 cm	coastal areas	×	×	×	×	×	×	×	×	×	×	✓
<i>Asphodelus fistulosus</i>	Asphodelaceae	onion weed	×	✓	×	✓	×	×	wide range of habitats, esp. open sites	erect herb flowering stem 20–28 cm	throughout catchment	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
<i>Bidens pilosa</i>	Asteraceae	cobbler's pegs	×	✓	×	✓	×	✓	disturbed areas	hairy woody herb to 1 m	throughout catchment	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
<i>Bryophyllum delagoense</i> = <i>Kalanchoe delagoense</i>	Crassulaceae	mother-of-millions	×	✓	¹	✓	✓	✓	rocky sites, near habitation	herb to 1 m	lower and mid-Hunter	×	×	×	×	✓	✓	✓	✓	✓	✓	✓
<i>Conyza canadensis</i> var. <i>canadensis</i>	Asteraceae	Canadian fleabane	×	✓	×	✓	×	×	disturbed sites	erect annual herb to 1.5 m	south-eastern catchment	×	×	×	×	×	×	✓	×	✓	×	✓
<i>Conyza sumatrensis</i> = <i>C. albidula</i>	Asteraceae	tall fleabane	×	✓	×	✓	✓	×	pasture, wastelands, cultivation	erect annual herb to 2 m	throughout catchment	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
<i>Eryngium maritimum</i>	Apiaceae	eryngium	×	✓	×	✓	×	✓	coastal sand dunes	perennial herb to 50 cm	coastal areas	×	×	×	×	×	×	×	×	×	×	✓
<i>Foeniculum vulgare</i>	Apiaceae	fennel	×	✓	×	✓	✓	✓	disturbed sites, wasteland	erect or annual herb 1–2.5 m	throughout catchment	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
<i>Galium aparine</i>	Rubiaceae	goosegrass	×	✓	×	✓	×	×	moist sites	twining annual stem to 1.5 m	throughout catchment	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
<i>Gazania rigens</i>	Asteraceae	gazania	×	✓	×	✓	×	×	coastal dunes, roadsides	perennial herb	south of Newcastle	×	×	×	×	×	×	×	×	×	×	✓
<i>Gladiolus guenzii</i>	Iridaceae	gladiolus	×	✓	×	✓	×	×	pioneer on foredunes	herb 20–60 cm	coastal areas	×	×	×	×	×	×	×	×	×	×	✓
<i>Gomphocarpus fruticosus</i> = <i>Asclepias fruticosa</i>	Asclepiadaceae	narrow-leaved cotton bush	×	✓	×	✓	✓	×	waste places, river banks	shrub 0.5–2 m	throughout catchment	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

¹ All except Maitland, Newcastle, Port Stephens

Scientific name	Family	Common name	Weed type					Environment and habitat in catchment	Habit and growth form	Distribution	Rylstone	Mudgee	Merriwa	Murrumbidgee	Stone	Muswellbrook	Singleton	Maitland	Dungog	Cessnock	Port Stephens	Newcastle
			Native	Introduced	Noxious	Environmental	Agricultural															
<i>Hydrocotyle bonariensis</i>	Apiaceae	pennywort	X	✓	X	✓	X	coloniser of sand dunes	perennial herb, leaves 30–120mm dia	coastal areas	X	X	X	X	X	X	X	X	X	✓	✓	
<i>Hypochaeris radicata</i>	Asteraceae	cat's ear	X	✓	X	✓	✓	lawns, gardens, roadsides, pastures, disturbed habitats	perennial herb, 15–80 cm	throughout catchment	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
<i>Oenothera drummondii</i>	Onagraceae	evening primrose	X	✓	X	✓	X	coastal sand dunes	perennial herb to c.60 cm	coastal areas	X	X	X	X	X	X	X	X	X	✓	✓	
<i>Oenothera stricta</i> ssp. <i>stricta</i>	Onagraceae	evening primrose	X	✓	X	✓	X	disturbed sites	erect annual herb to c.100 cm	throughout catchment	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
<i>Opuntia stricta</i> var. <i>stricta</i>	Cactaceae	prickly pear	X	✓	✓	✓	✓	widespread in most habitats	bushy clumped plant, usually <1.5 m	throughout catchment	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
<i>Oxalis corniculata</i>	Oxalidaceae	creeping oxalis	X	✓	X	✓	✓	gardens, parks	erect or creeping herb with stems to 30 cm	coastal areas	X	X	X	X	X	X	X	X	X	✓	✓	
<i>Petrorhagia nanteuillii</i>	Caryophyllaceae	velvet pink	X	✓	X	✓	X	pasture & disturbed ground	herb to 60 cm	throughout catchment	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
<i>Phytolacca octandra</i>	Phytolaccaceae	inkweed	X	✓	X	✓	✓	moist areas	herb 1–2 m	throughout catchment	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
<i>Plantago lanceolata</i>	Plantaginaceae	lamb's tongues	X	✓	X	✓	✓	disturbed sites & pastures	annual herb	throughout catchment	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
<i>Senecio madagascariensis</i>	Asteraceae	fireweed	X	✓	X	✓	✓	pasture & disturbed sites in coastal districts	annual herb, 20–60 cm	throughout catchment	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
<i>Sida rhombifolia</i>	Malvaceae	Paddy's lucerne	X	✓	X	✓	✓	gardens, roadsides, wastelands	erect subshrub to c.1 m	throughout catchment	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
<i>Solanum nigrum</i>	Solanaceae	blackberry nighshade	X	✓	X	✓	✓	widespread near habitations or horticultural crops	herb or short-lived perennial shrub	throughout catchment	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
<i>Sonchus oleraceus</i>	Asteraceae	milk thistle	X	✓	X	✓	✓	cultivation, pastures & disturbed areas	annual herb 30–110 cm	throughout catchment	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
<i>Taraxacum officinale</i>	Asteraceae	dandelion	X	✓	X	✓	✓	lawns, roadsides, wasteland & pastures	perennial herb 5–40 cm	throughout catchment	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
<i>Urtica urens</i>	Urticaceae	small nettle	X	✓	X	✓	✓	widespread, usually in sheltered sites	annual herb to 60 cm	throughout catchment	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
<i>Verbena bonariensis</i>	Verbenaceae	purple top	X	✓	X	✓	✓	invasive weed in wastelands & cultivated areas	perennial herb 0.6–2 m	throughout catchment	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	

VINES, CLIMBERS AND TWINERS

<i>Anredera cordifolia</i>	Basellaceae	Madeira vine	X	✓	X	✓	X	margins of rainforest, old settlements, moist areas	climber, stems to c.20 m	throughout catchment	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
<i>Araujia sericifera</i> = <i>A. hortorum</i>	Asclepiadaceae	moth plant	X	✓	X	✓	X	disturbed sites	climber stems to 5 m	throughout catchment west to Muswellbrook	X	X	X	X	✓	✓	✓	✓	✓	✓	✓
<i>Cardiospermum grandiflorum</i>	Sapindaceae	balloon vine	X	✓	X	✓	X	widespread in moist situations	herbaceous climber, stems to 10 m	throughout catchment	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
<i>Delairea odorata</i>	Asteraceae	Cape ivy	X	✓	X	✓	X	moist gullies in coastal districts	perennial twiner with stems to 3 m	coastal and subcoastal moist gullies	X	X	X	X	X	X	X	X	X	✓	✓
<i>Ipomoea indica</i>	Convolvulaceae	blue morning glory	X	✓	X	✓	X	urban bushland, gullies & creeks	climber with twining stems	lower Hunter: some upper Hunter urban areas	X	X	X	✓	✓	✓	✓	✓	✓	✓	✓
<i>Lonicera japonica</i>	Caprifoliaceae	Japanese honeysuckle	X	✓	X	✓	X	weed in moist gullies	climber or scrambling shrub, 7–10 m	lower Hunter	X	X	X	X	X	X	✓	✓	✓	✓	✓
<i>Tradescantia albiflora</i>	Commelinaceae	wandering Jew	X	✓	X	✓	X	creek banks, shaded places, esp. rainforest	perennial succulent herb	lower Hunter and in upper Hunter urban bushland	X	X	X	X	✓	✓	✓	✓	✓	✓	✓

2 ESTUARINE FORESTS AND SALT MARSH

SHRUBS

<i>Chrysanthemoides monilifera</i> ssp. <i>rotundata</i>	Asteraceae	bitou bush	X	✓	¹	✓	X	disturbed coastal sites	erect shrub to 1.5 m	coastal areas	X	X	X	X	X	X	X	X	X	✓	✓
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GRASSES

<i>Pennisetum clandestinum</i>	Poaceae	kikuyu grass	X	✓	X	✓	X	pastures, lawns, playing fields, gardens, roadsides	rhizomatous perennial to 0.9 m	throughout catchment	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
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¹ Newcastle/Port Stephens

Scientific name	Family	Common name	Weed type						Environment and habitat in catchment	Habit and growth form	Distribution	Rylstone	Mudgee	Merriwa	Murrumbidgee	Stone	Muswellbrook	Singleton	Maitland	Dungog	Cessnock	Port Stephens	Newcastle
			Native	Introduced	Noxious	Environmental	Agricultural	Amenity															
<i>Pennisetum clandestinum</i>	Poaceae	kikuyu grass	X	✓	X	✓	X	✓	pastures, lawns, playing fields, gardens, roadsides	rhizomatous perennial to 0.9 m	throughout catchment	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
SEDGES AND RUSHES																							
<i>Cyperus aggregatus</i>	Cyperaceae	sedge	X	✓	X	✓	X	X	sandy soils	tufted perennial, culms 5–60 cm	lower Hunter	X	X	X	X	X	X	✓	✓	✓	✓	✓	
<i>Juncus acutus</i> ssp. <i>acutus</i>	Juncaceae	sharp rush	X	✓	X	✓	X	✓	naturalized weed of moist & often saline areas	tussock-forming perennial with culms 30–160 cm	throughout catchment	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
HERBS																							
<i>Alternanthera philoxeroides</i>	Amaranthaceae	alligator weed	X	✓	✓	✓	✓	✓	floating or rooted mats in aquatic inundated land	aquatic & terrestrial perennial herb	lower Hunter	X	X	X	X	X	X	✓	✓	✓	✓	✓	
<i>Anagallis arvensis</i>	Primulaceae	pimpernel	X	✓	X	✓	X	✓	pastures, disturbed sites, creek banks	perennial or annual herb	throughout catchment	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
<i>Arctotheca calendula</i>	Asteraceae	Cape weed	X	✓	X	✓	✓	X	a weed of pastures & cultivation	stemless annual herb to 30 cm	throughout catchment	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
<i>Bidens pilosa</i>	Asteraceae	cobbler's pegs	X	✓	X	✓	X	✓	disturbed areas	hairy woody herb to 1 m	throughout catchment	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
<i>Carduus tenuiflorus</i>	Asteraceae	winged slender thistle	X	✓	X	✓	✓	✓	pastures, roadsides, wastelands, cultivated areas	annual herb 50–150 cm	throughout catchment	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
<i>Centaureum tenuiflorum</i>	Gentianaceae	branched centauray	X	✓	X	✓	✓	X	widespread, mainly pastures & woodland	erect herb 20–40 cm	throughout catchment	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
<i>Ciclospermum leptophyllum</i>	Apiaceae	slender celery	X	✓	X	✓	X	X	gardens, roadsides & other disturbed areas	erect annual herb 15–70 cm	throughout catchment	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
<i>Cirsium vulgare</i>	Asteraceae	spear thistle	X	✓	X	✓	✓	✓	wastelands, cultivated areas, roadsides	erect herb to 1.5 m	throughout catchment	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
<i>Conyza sumatrensis</i> = <i>C. albida</i>	Asteraceae	tall fleabane	X	✓	X	✓	✓	X	pasture, wastelands, cultivation	erect annual herb to 2 m	throughout catchment	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
<i>Echium plantagineum</i>	Boraginaceae	Paterson's curse	X	✓	✓	✓	✓	✓	disturbed areas & pastures	annual herb to 120 cm	throughout catchment	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
<i>Facelis retusa</i>	Asteraceae	facelis	X	✓	X	✓	X	X	near habitation, often in lawns, light to well-drained soils	perennial herb 5–30 cm	throughout catchment	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
<i>Foeniculum vulgare</i>	Apiaceae	fennel	X	✓	X	✓	✓	✓	disturbed sites, wasteland	erect or annual herb 1–2.5 m	throughout catchment	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
<i>Fumaria muralis</i> ssp. <i>muralis</i>	Fumariaceae	wall fumitory	X	✓	X	✓	X	X	wastelands & cultivated areas	delicate herb	throughout catchment	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
<i>Galenia pubescens</i>	Aizoaceae	galenia	X	✓	X	✓	✓	✓	weed of cultivation, mines & roadsides	prostrate woody herb	throughout catchment	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
<i>Gamochoaeta americana</i> = <i>Gnaphalium americana</i>	Asteraceae	cudweed	X	✓	X	✓	✓	✓	disturbed areas	slender herb 10–35 cm	eastern part of catchment	X	X	X	X	X	✓	✓	✓	✓	✓	✓	
<i>Gamochoaeta spicata</i> = <i>Gnaphalium coarctatum</i>	Asteraceae	spiked cudweed	X	✓	X	✓	✓	✓	disturbed areas	annual or biennial herb 7–40 cm	throughout catchment	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
<i>Gomphocarpus fruticosus</i> = <i>Asclepias fruticosa</i>	Asclepiadaceae	narrow-leaved cotton bush	X	✓	X	✓	✓	X	waste places, river banks	shrub 0.5–2 m	throughout catchment	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
<i>Heliotropium amplexicaule</i>	Boraginaceae	blue heliotrope	X	✓	X	✓	✓	✓	roadsides, pastures	perennial herb up to 15 cm	throughout catchment	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
<i>Hydrocotyle bonariensis</i>	Apiaceae	pennywort	X	✓	X	✓	X	X	coloniser of sand dunes	perennial herb, leaves 30–120 mm dia	lower Hunter	X	X	X	X	X	X	X	X	X	✓	✓	
<i>Hypochaeris radicata</i>	Asteraceae	cat's ear	X	✓	X	✓	✓	✓	lawns, gardens, roadsides, pastures, disturbed habitats	perennial herb, 15–80 cm	throughout catchment	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
<i>Lepidium africanum</i>	Brassicaceae	common peppergrass	X	✓	X	✓	X	✓	widespread in a variety of habitats	perennial herb to 70 cm	throughout catchment	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
<i>Malva parviflora</i>	Malvaceae	small-flowered mallow	X	✓	X	✓	✓	✓	mostly in agricultural environments, esp. stock camps	erect annual herb to c.50 cm	mostly eastern catchment	X	X	X	X	X	✓	✓	✓	✓	✓	✓	
<i>Marrubium vulgare</i>	Lamiaceae	horehound	X	✓	X	✓	✓	✓	disturbed sites, roadsides, farms & waste areas in towns	perennial shrub to 60 cm	in most agricultural areas	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
<i>Modiola caroliniana</i>	Malvaceae	red-flowered mallow	X	✓	X	✓	✓	X	gardens & waste places	perennial herb usually under 25 cm	throughout catchment	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
<i>Oenothera mollissima</i>	Onagraceae	evening primrose	X	✓	X	✓	X	X	disturbed sites	annual herb to c. 1 m	lower Hunter	X	X	X	X	X	✓	✓	✓	✓	✓	✓	
<i>Opuntia aurantiaca</i>	Cactaceae	tiger pear	X	✓	✓	✓	✓	✓	occurs in a wide variety of habitats	low-growing plant, 4–10 cm	throughout catchment	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
<i>Opuntia stricta</i> var. <i>stricta</i>	Cactaceae	prickly pear	X	✓	✓	✓	✓	✓	occurs in a wide variety of habitats	bushy clumped plant, < 1.5 m	throughout catchment	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
<i>Oxalis corniculata</i>	Oxalidaceae	creeping oxalis	X	✓	X	✓	X	✓	gardens, parks	erect or creeping herb with stems to 30 cm	coastal areas	X	X	X	X	X	X	X	X	X	✓	✓	
<i>Paronychia brasiliiana</i>	Caryophyllaceae	Chilean whitlow wort	X	✓	X	✓	✓	X	lawns & pastures, sandy soils	perennial herb	throughout catchment	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
<i>Petrorhagia nanteuillii</i>	Caryophyllaceae	velvet pink	X	✓	X	✓	X	✓	pasture & disturbed ground	herb to 60 cm	throughout catchment	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
<i>Petrorhagia velutina</i>	Caryophyllaceae	velvet pink	X	✓	X	✓	X	✓	pasture & disturbed ground	erect annual to 60 cm	throughout catchment	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	

Scientific name	Family	Common name	Weed type					Environment and habitat in catchment	Habit and growth form	Distribution	Bystone	Mudgee	Merrima	Murrumbidgee	Scone	Muswellbrook	Singleton	Maitland	Dungog	Cessnock	Port Stephens	Newcastle
			Native	Introduced	Noxious	Environmental	Agricultural															
<i>Plantago lanceolata</i>	Plantaginaceae	lamb's tongues	X	✓	X	✓	✓	✓	disturbed sites & pastures	annual herb	throughout catchment	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
<i>Richardia stellaris</i>	Rubiaceae	field madder	X	✓	X	✓	✓	✓	disturbed sites	perennial herb to 15 cm	throughout catchment	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
<i>Sclerolaena birchii</i>	Chenopodiaceae	galvanised burr	✓	X	X	✓	✓	X	widespread on sandy soils	perennial herb to c.1 m	western catchment	✓	✓	✓	✓	✓	✓	X	X	X	X	X
<i>Senecio madagascariensis</i>	Asteraceae	fireweed	X	✓	X	✓	✓	✓	pasture & disturbed sites in coastal districts	annual herb, 20–60 cm	throughout catchment	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
<i>Sida rhombifolia</i>	Malvaceae	Paddy's lucerne	X	✓	X	✓	✓	✓	gardens, roadsides, wastelands	erect subshrub to c.1 m	throughout catchment	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
<i>Silybum marianum</i>	Asteraceae	variegated thistle	X	✓	X	✓	✓	✓	cultivated areas, pastures, roadsides, disturbed areas	biennial herb to 2.5 m	throughout catchment	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
<i>Solanum nigrum</i>	Solanaceae	blackberry nightshade	X	✓	X	✓	✓	✓	widespread near habitations or horticultural crops	herb or short-lived perennial shrub	throughout catchment	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
<i>Sonchus oleraceus</i>	Asteraceae	milk thistle	X	✓	X	✓	✓	✓	cultivation, pastures & disturbed areas	annual herb 30–110 cm	throughout catchment	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
<i>Stellaria media</i>	Caryophyllaceae	common chickweed	X	✓	X	✓	X	X	weed of cultivation, also sheltered sites in remnant vegetation	annual or biennial herb	throughout catchment	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
<i>Taraxacum officinale</i>	Asteraceae	dandelion	X	✓	X	✓	✓	✓	lawns, roadsides, wasteland & pastures	perennial herb 5–40 cm	throughout catchment	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
<i>Trifolium arvense</i>	Fabaceae	hare's-foot clover	X	✓	X	✓	X	✓	cultivated areas, lawns, disturbed sites, pastures	erect annual to 40 cm	throughout catchment	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
<i>Trifolium repens</i>	Fabaceae	white clover	X	✓	X	✓	X	✓	cultivated areas, lawns, pastures	perennial to 30 cm	throughout catchment	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
<i>Urtica urens</i>	Urticaceae	small nettle	X	✓	X	✓	✓	✓	sheltered sites	annual herb to 60 cm	throughout catchment	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
<i>Verbena bonariensis</i>	Verbenaceae	purple top	X	✓	X	✓	✓	✓	invasive weed in wastelands & cultivated areas	perennial herb 0.6–2 m	throughout catchment	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
<i>Xanthium occidentale</i>	Asteraceae	Noogoora burr	X	✓	✓	✓	✓	✓	rivers, creeks, flats, after flooding, disturbed areas	herb to 2 m	throughout catchment	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
<i>Xanthium spinosum</i>	Asteraceae	Bathurst burr	X	✓	✓	✓	✓	✓	agricultural ground, disturbed areas, most soil types	herb to 1 m	throughout catchment	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

VINES, CLIMBERS AND TWINERS

<i>Anredera cordifolia</i>	Basellaceae	Madeira vine	X	✓	X	✓	X	✓	margins of rainforest, old settlements, moist areas	climber, stems to c.20 m	throughout catchment	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
<i>Cardiospermum grandiflorum</i>	Sapindaceae	balloon vine	X	✓	X	✓	X	✓	widespread in moist situations	herbaceous climber, stems to 10 m	throughout catchment	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
<i>Ipomoea indica</i>	Convolvulaceae	blue morning glory	X	✓	X	✓	X	✓	urban bushland, gullies & creeks	climber with twining stems	lower Hunter; some upper Hunter urban areas	X	X	X	✓	✓	✓	✓	✓	✓	✓	✓
<i>Myrsiphyllum asparagoides</i> = <i>Asparagus asparagoides</i>	Asparagaceae	florist's smilax	X	✓	X	✓	X	✓	mostly urban bushland, cemeteries	climbing herb with stems to c. 3 m	throughout catchment	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
<i>Tradescantia albiflora</i>	Commelinaceae	wandering Jew	X	✓	X	✓	X	✓	creek banks, shaded places, esp. rainforest	perennial succulent herb	lower Hunter and in upper Hunter urban bushland	X	X	X	X	X	✓	✓	✓	✓	✓	✓
<i>Vicia sativa</i> ssp. <i>angustifolia</i> = <i>V. sativa</i> ssp. <i>nigra</i>	Fabaceae	narrow-leaved vetch	X	✓	X	✓	✓	X	mostly pasture & woodland	trailing or climbing annual herb	throughout catchment	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

4 FORESTS AND WOODLANDS OF THE VALLEY LOWLANDS

TREES

<i>Ailanthus altissima</i>	Simaroubaceae	tree of heaven	X	✓	X	✓	X	✓	cultivated areas, suckering habit	tree to 8 m	throughout catchment	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
<i>Cinnamomum camphora</i>	Lauraceae	camphor laurel	X	✓	X	✓	X	✓	coastal areas, esp. near rainforest areas	large tree	lower Hunter	X	X	X	X	X	X	✓	✓	✓	✓	✓
<i>Ligustrum lucidum</i>	Oleaceae	large-leaved privet	X	✓	N	✓	X	✓	coastal rainforest & wet gullies	shrub or small tree to c. 10 m	lower Hunter and some upper Hunter urban areas	X	X	X	✓	✓	✓	✓	✓	✓	✓	✓
<i>Ligustrum sinense</i>	Oleaceae	small-leaved privet	X	✓	N	✓	X	✓	margins of rainforest, along fence lines, cleared areas	shrub to c. 3 m	lower Hunter and some small occurrences in upper Hunter	X	X	X	✓	✓	✓	✓	✓	✓	✓	✓
<i>Populus alba</i>	Salicaceae	white poplar	X	✓	X	✓	X	X	frequently naturalised through suckering, often planted on river banks	erect tree to 20 m	naturalised in parts of lower Hunter	X	X	X	✓	✓	✓	✓	✓	✓	✓	✓
<i>Salix babylonica</i>	Salicaceae	weeping willow	X	✓	X	✓	X	X	along streams & around dams	spreading, weeping tree to 20 m	throughout catchment	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
<i>Salix fragilis</i> var. <i>fragilis</i>	Salicaceae	crack willow	X	✓	✓	✓	X	X	along rivers, streams & dams	tree to 18 m	upper Hunter	✓	✓	✓	✓	✓	X	X	X	X	X	X

Scientific name	Family	Common name	Weed type					Environment and habitat in catchment	Habit and growth form	Distribution	Bystone	Mudgee	Merrima	Murrumbidgee	Scone	Muswellbrook	Singleton	Maitland	Dungog	Cessnock	Port Stephens	Newcastle
			Native	Introduced	Noxious	Environmental	Agricultural															
<i>Panicum maximum</i> var. <i>maximum</i>	Poaceae	Guinea grass	X	✓	X	✓	✓	✓	pastures, roadsides & disturbed sites	perennial grass to c. 3 m	throughout catchment	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
<i>Paspalum dilatatum</i>	Poaceae	paspalum	X	✓	X	✓	X	✓	pastures, lawns, disturbed areas	tufted perennial to 2 m	throughout catchment	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
<i>Pennisetum clandestinum</i>	Poaceae	kikuyu grass	X	✓	X	✓	X	✓	pastures, lawns, playing fields, gardens, roadsides	rhizomatous perennial to 0.9 m	throughout catchment	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
<i>Setaria gracilis</i>	Poaceae	slender pigeon grass	X	✓	X	✓	X	✓	roadsides, disturbed areas	tufted perennial to 1.2 m	throughout catchment	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
<i>Sporobolus fertilis</i> = <i>S. indicus</i> var. <i>major</i>	Poaceae	giant Parramatta grass	X	✓	✓	X	✓	X	disturbed areas, pastures	tufted perennial to 0.8–1.6 m	lower Hunter	X	X	X	X	X	X	✓	✓	✓	✓	✓
<i>Stenotaphrum secundatum</i>	Poaceae	buffalo grass	X	✓	X	✓	X	X	degraded areas	perennial grass to 0.3 m	lower Hunter, subcoastal areas	X	X	X	X	X	X	X	X	X	✓	✓
GROUND FERNS																						
<i>Nephrolepis cordifolia</i>	Davalliaceae	fishbone fern	X	✓	X	✓	X	X	rainforest or open forest, urban bushland	rhizomatous fern, fronds to 75 cm	lower Hunter	X	X	X	X	X	X	✓	✓	✓	✓	✓
SEDGES AND RUSHES																						
<i>Cyperus aggregatus</i>	Cyperaceae	sedge	X	✓	X	✓	X	X	sandy soils	tufted perennial, culms 5–60 cm	lower Hunter	X	X	X	X	X	X	✓	✓	✓	✓	✓
<i>Juncus acutus</i> ssp. <i>acutus</i>	Juncaceae	sharp rush	X	✓	X	✓	X	✓	naturalised weed of moist & often saline areas	tussock-forming perennial with culms 30–160 cm	throughout catchment	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
HERBS																						
<i>Alternanthera philoxeroides</i>	Amaranthaceae	alligator weed	X	✓	✓	✓	✓	✓	floating or rooted mats in aquatic inundated land	aquatic & terrestrial perennial herb	lower Hunter	X	X	X	X	X	X	✓	✓	✓	✓	✓
<i>Anagallis arvensis</i>	Primulaceae	pimpernel	X	✓	X	✓	X	✓	pastures, disturbed sites, creek banks	perennial or annual herb	throughout catchment	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
<i>Arctotheca calendula</i>	Asteraceae	Cape weed	X	✓	X	✓	✓	X	a weed of pastures & cultivation	stemless annual herb to 30 cm	throughout catchment	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
<i>Asphodelus fistulosus</i>	Asphodelaceae	onion weed	X	✓	X	✓	X	X	wide range of habitats, esp. open sites	erect herb flowering stem 20–28 cm	throughout catchment	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
<i>Bidens pilosa</i>	Asteraceae	cobbler's pegs	X	✓	X	✓	X	✓	disturbed areas	hairy woody herb to 1 m	throughout catchment	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
<i>Bidens subalternans</i>	Asteraceae	greater beggar's tricks	X	✓	X	✓	X	✓	disturbed sites	woody herb to 1.6 m	throughout catchment	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
<i>Bryophyllum delagoense</i> = <i>Kalanchoe delagoense</i>	Crassulaceae	mother-of-millions	X	✓	¹	✓	✓	✓	rocky sites, near habitation	herb to 1 m	lower and mid-Hunter	X	X	X	X	✓	✓	✓	✓	✓	✓	✓
<i>Carduus tenuiflorus</i>	Asteraceae	winged slender thistle	X	✓	X	✓	✓	✓	pastures, roadsides, wastelands, cultivated areas	annual herb 50–150 cm	throughout catchment	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
<i>Centaurium tenuiflorum</i>	Gentianaceae	branched centauray	X	✓	X	✓	✓	X	widespread, mainly pastures & woodland	erect herb 20–40 cm	throughout catchment	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
<i>Ciclospermum leptophyllum</i>	Apiaceae	slender celery	X	✓	X	✓	X	X	gardens, roadsides & other disturbed areas	erect annual herb 15–70 cm	throughout catchment	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
<i>Cirsium vulgare</i>	Asteraceae	spear thistle	X	✓	X	✓	✓	✓	wastelands, cultivated areas, roadsides	erect herb to 1.5 m	throughout catchment	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
<i>Conyza sumatrensis</i> = <i>C. albida</i>	Asteraceae	tall fleabane	X	✓	X	✓	✓	X	pasture, wastelands, cultivation	erect annual herb to 2 m	throughout catchment	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
<i>Echium plantagineum</i>	Boraginaceae	Paterson's curse	X	✓	✓	✓	✓	✓	disturbed areas & pastures	annual herb to 120 cm	throughout catchment	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
<i>Facelis retusa</i>	Asteraceae	facelis	X	✓	X	✓	X	X	near habitation, often in lawns, light to well-drained soils	perennial herb 5–30 cm	throughout catchment	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
<i>Foeniculum vulgare</i>	Apiaceae	fennel	X	✓	X	✓	✓	✓	disturbed sites, wasteland	erect or annual herb 1–2.5 m	throughout catchment	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
<i>Fumaria muralis</i> ssp. <i>muralis</i>	Fumariaceae	wall fumitory	X	✓	X	✓	X	X	wastelands & cultivated areas	delicate herb	throughout catchment	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
<i>Galenia pubescens</i>	Aizoaceae	galenia	X	✓	X	✓	✓	✓	weed of cultivation, mines & roadsides	prostrate woody herb	throughout catchment	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
<i>Gamochoeta americana</i> = <i>Gnaphallium americana</i>	Asteraceae	cudweed	X	✓	X	✓	✓	✓	disturbed areas	slender herb 10–35 cm	eastern part of catchment	X	X	X	X	X	✓	✓	✓	✓	✓	✓
<i>Gamochoeta spicata</i> = <i>Gnaphallium coarctatum</i>	Asteraceae	spiked cudweed	X	✓	X	✓	✓	✓	disturbed areas	annual or biennial herb 7–40 cm	throughout catchment	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
<i>Gomphocarpus fruticosus</i> = <i>Asclepias fruticosa</i>	Asclepiadaceae	narrow-leaved cotton bush	X	✓	X	✓	✓	X	waste places, river banks	shrub 0.5–2 m	throughout catchment	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
<i>Heliotropium amplexicaule</i>	Boraginaceae	blue heliotrope	X	✓	X	✓	✓	✓	roadsides, pastures	perennial herb up to 15 cm	throughout catchment	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

¹ All except Maitland, Newcastle, Port Stephens

Scientific name	Family	Common name	Weed type					Environment and habitat in catchment	Habit and growth form	Distribution	Bylstone	Mudgee	Merriwa	Murrurundi	Scone	Muswellbrook	Singleton	Maitland	Dungog	Cessnock	Port Stephens	Newcastle
			Native	Introduced	Noxious	Environmental	Agricultural															
<i>Cardiospermum grandiflorum</i>	Sapindaceae	balloon vine	X	✓	X	✓	X	✓	widespread in moist situations	herbaceous climber, stems to 10 m	throughout catchment	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
<i>Convolvulus arvensis</i>	Convolvulaceae	convolvulus	X	✓	X	X	✓	X	cultivated areas	perennial herb with trailing & twining branches	most of catchment	✓	✓	✓	✓	✓	✓	X	✓	✓	X	X
<i>Delairea odorata</i>	Asteraceae	Cape ivy	X	✓	X	✓	X	✓	moist gullies in coastal districts	perennial twiner with stems to 3 m	coastal and sub-coastal moist gullies	X	X	X	X	X	X	X	X	X	✓	✓
<i>Ipomoea indica</i>	Convolvulaceae	blue morning glory	X	✓	X	✓	X	✓	urban bushland, gullies & creeks	climber with twining stems	lower Hunter; some upper Hunter urban areas	X	X	X	✓	✓	✓	✓	✓	✓	✓	✓
<i>Lonicera japonica</i>	Caprifoliaceae	Japanese honeysuckle	X	✓	X	✓	X	X	weed in moist gullies	climber or scrambling shrub, 7–10 m	lower Hunter	X	X	X	X	X	X	✓	✓	✓	✓	✓
<i>Myrsiphyllum asparagoides</i> = <i>Asparagus asparagoides</i>	Asparagaceae	florist's smilax	X	✓	X	✓	X	✓	mostly urban bushland, cemeteries	climbing herb with stems to c. 3 m	throughout catchment	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
<i>Passiflora edulis</i>	Passifloraceae	common passionfruit	X	✓	X	✓	X	X	edge of rainforest & moist gullies	climber	lower Hunter and west to Muswellbrook	X	X	X	X	✓	✓	✓	✓	✓	✓	✓
<i>Passiflora subpeltata</i>	Passifloraceae	white passionflower	X	✓	X	✓	X	X	coast on margins of rainforest, moist open forest	climber, leaves 3–10 cm	lower and lower Hunter	X	X	X	X	✓	✓	✓	✓	✓	✓	✓
<i>Tradescantia albiflora</i>	Commelinaceae	wandering Jew	X	✓	X	✓	X	✓	creek banks, shaded places, esp. rainforest	perennial succulent herb	lower Hunter and in upper Hunter urban bushland	X	X	X	X	✓	✓	✓	✓	✓	✓	✓
<i>Vicia sativa</i> ssp. <i>angustifolia</i> = <i>V. sativa</i> ssp. <i>nigra</i>	Fabaceae	narrow-leaved vetch	X	✓	X	✓	✓	X	mostly pasture & woodland	trailing or climbing annual herb	throughout catchment	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

5 TALL FORESTS AND RAINFOREST OF HIGH ELEVATION BASALT PLATEAUX AND RANGES

TREES

<i>Ailanthus altissima</i>	Simaroubaceae	tree of heaven	X	✓	X	✓	X	✓	cultivated areas, suckering habit	tree to 8 m	throughout catchment	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
<i>Ligustrum sinense</i>	Oleaceae	small-leaved privet	X	✓	N	✓	X	✓	margins of rainforest, along fence lines, cleared areas	shrub to c. 3 m	lower Hunter and some small occurrences in upper Hunter	X	X	X	✓	✓	✓	✓	✓	✓	✓	✓

SHRUBS

<i>Ageratina adenophora</i>	Asteraceae	crofton weed	X	✓	¹	✓	✓	✓	disturbed moist sites, fertile soils	erect herb 1–2 m	lower Hunter	X	X	X	X	X	X	✓	✓	✓	✓	✓
<i>Ageratina riparia</i>	Asteraceae	mistflower	X	✓	²	✓	✓	✓	disturbed damp sites, near rainforest	erect herb 0.3–1 m	lower Hunter	X	X	X	X	X	X	✓	✓	✓	✓	✓
<i>Cytisus scoparius</i>	Fabaceae	Scotch broom	X	✓	³	✓	X	✓	invasive weed in elevation woodland	erect shrub to 4 m	Barrington Tops	X	X	X	X	✓	✓	✓	X	✓	X	X
<i>Lantana camara</i>	Verbenaceae	lantana	X	✓	C	✓	✓	✓	sclerophyll forest & disturbed rainforest, coastal districts	shrub up to c. 3 m	lower and mid-Hunter, slowly advancing west	X	X	X	X	X	✓	✓	✓	✓	✓	✓
<i>Rosa rubiginosa</i>	Rosaceae	sweet briar	X	✓	✓	✓	✓	✓	widespread, mostly in agricultural habitats	erect scrambling shrub	throughout most of catchment	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
<i>Rubus ulmifolius</i>	Rosaceae	blackberry	X	✓	✓	✓	✓	✓	mostly agricultural land & riparian areas	semi-deciduous shrub to 2 m	upper Hunter	✓	✓	✓	✓	✓	✓	✓	X	✓	X	X
<i>Solanum pseudocapsicum</i>	Solanaceae	Madeira winter cherry	X	✓	X	✓	✓	X	moist soils, coastal districts, rainforest regrowth	shrub to 2 m	throughout catchment	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

GRASSES

<i>Bromus cartharticus</i>	Poaceae	prairie grass	X	✓	X	✓	X	X	disturbed ground, pastures & cultivated areas	tufted perennial to 1 m	throughout catchment	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
<i>Holcus lanatus</i>	Poaceae	Yorkshire fog	X	✓	X	✓	✓	✓	fertile soils in wet soils	perennial to 1 m	eastern part of catchment	X	X	X	X	✓	✓	✓	✓	✓	✓	✓
<i>Lolium rigidum</i>	Poaceae	Wimmera ryegrass	X	✓	X	✓	X	X	pastures & cultivated areas	annual to 0.9 m	throughout catchment	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
<i>Paspalum dilatatum</i>	Poaceae	paspalum	X	✓	X	✓	X	✓	pastures, lawns, disturbed areas	tufted perennial to 2 m	throughout catchment	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
<i>Poa annua</i>	Poaceae	winter grass	X	✓	X	✓	✓	X	cultivated land & disturbed sites	tufted annual to 0.3 m	throughout catchment	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
<i>Setaria pumila</i>	Poaceae	pale pigeon grass	X	✓	X	✓	✓	✓	cultivated land & disturbed sites	tufted annual to 1.3 m	throughout catchment	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
<i>Setaria viridis</i>	Poaceae	green pigeon grass	X	✓	X	✓	X	✓	a weed of cultivation	tufted annual to 1 m	throughout catchment	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

¹ Cessnock/Maitland/Newcastle/Port Stephens ² Maitland/Newcastle/Port Stephens ³ Dungog/Merriwa/Muswellbrook/Murrurundi/Scone/Singleton

Scientific name	Family	Common name	Weed type					Environment and habitat in catchment	Habit and growth form	Distribution	Bystone	Mudgee	Merrima	Murrumbidgee	Scone	Muswellbrook	Singleton	Maitland	Dungog	Cessnock	Port Stephens	Newcastle
			Native	Introduced	Noxious	Environmental	Agricultural															
<i>Senecio madagascariensis</i>	Asteraceae	fireweed	X	✓	X	✓	✓	✓	pasture & disturbed sites in coastal districts	annual herb, 20–60 cm	throughout catchment	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
<i>Sida rhombifolia</i>	Malvaceae	Paddy's lucerne	X	✓	X	✓	✓	✓	gardens, roadsides, wastelands	erect subshrub to c.1 m	throughout catchment	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
<i>Silybum marianum</i>	Asteraceae	variegated thistle	X	✓	X	✓	✓	✓	cultivated areas, pastures, roadsides, disturbed areas	biennial herb to 2.5 m	throughout catchment	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
<i>Solanum nigrum</i>	Solanaceae	blackberry nighshade	X	✓	X	✓	✓	✓	widespread near habitations or horticultural crops	herb or short-lived perennial shrub	throughout catchment	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
<i>Sonchus asper</i> ssp. <i>glaucescens</i>	Asteraceae	prickly sowthistle	X	✓	X	✓	✓	✓	roadsides, cultivation, gardens & wasteland	biennial herb 20–150 cm	throughout catchment	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
<i>Sonchus oleraceus</i>	Asteraceae	milk thistle	X	✓	X	✓	✓	✓	cultivation, pastures & disturbed areas	annual herb 30–110 cm	throughout catchment	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
<i>Stellaria media</i>	Caryophyllaceae	common chickweed	X	✓	X	✓	X	X	weed of cultivation, also sheltered sites in remnant vegetation	annual or biennial herb	throughout catchment	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
<i>Tagetes minuta</i>	Asteraceae	stinking Roger	X	✓	X	✓	X	✓	roadsides & disturbed sites, river banks, woodlands	annual herb 1–2 m	throughout catchment	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
<i>Taraxacum officinale</i>	Asteraceae	dandelion	X	✓	X	✓	✓	✓	lawns, roadsides, wasteland & pastures	perennial herb 5–40 cm	throughout catchment	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
<i>Trifolium arvense</i>	Fabaceae	hare's-foot clover	X	✓	X	✓	X	✓	cultivated areas, lawns, disturbed sites, pastures	erect annual to 40 cm	throughout catchment	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
<i>Trifolium campestre</i>	Fabaceae	hop clover	X	✓	X	✓	X	✓	widely naturalised in a variety of habitats	prostrate or ascending annual herb, branches to 50 cm	throughout catchment	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
<i>Trifolium repens</i>	Fabaceae	white clover	X	✓	X	✓	X	✓	cultivated areas, lawns, pastures	perennial to 30 cm	throughout catchment	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
<i>Urtica urens</i>	Urticaceae	small nettle	X	✓	X	✓	✓	✓	sheltered sites	annual herb to 60 cm	throughout catchment	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
<i>Verbascum thapsus</i> ssp. <i>thapsus</i>	Scrophulariaceae	blanket weed	X	✓	X	✓	✓	X	woodland, pasture, disturbed land, widespread	erect biennial herb 0.5–2 m	lower and upper Hunter	✓	✓	✓	✓	✓	✓	X	X	✓	X	X
<i>Verbascum virgatum</i>	Scrophulariaceae	twiggy mullein	X	✓	X	✓	✓	X	disturbed sites, roadsides, habitations	erect biennial herb 1–2 m	throughout catchment	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
<i>Verbena bonariensis</i>	Verbenaceae	purple top	X	✓	X	✓	✓	✓	invasive weed in wastelands & cultivated areas	perennial herb 0.6–2 m	throughout catchment	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
<i>Verbena rigida</i>	Verbenaceae	veined verbena	X	✓	X	✓	✓	✓	coastal districts	perennial herb 0.2–0.5 m	primarily lower Hunter	X	X	X	X	X	✓	✓	✓	✓	✓	✓
<i>Verbena aristigera</i> = <i>V. tenuisecta</i>	Verbenaceae	verbena	X	✓	X	✓	✓	X	roadsides, disturbed areas, inland districts	perennial herb 0.3–0.6 m	throughout catchment	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

VINES, CLIMBERS AND TWINERS

<i>Myrsiphyllum asparagoides</i> = <i>Asparagus asparagoides</i>	Asparagaceae	florist's smilax	X	✓	X	✓	X	✓	mostly urban bushland, cemeteries	climbing herb with stems to c. 3 m	throughout catchment	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
<i>Passiflora subpeltata</i>	Passifloraceae	white passionflower	X	✓	X	✓	X	X	coast on margins of rainforest, moist open forest	climber, leaves 3–10 cm	lower and lower Hunter	X	X	X	X	X	✓	✓	✓	✓	✓	✓

6 OPEN GRASSY WOODLAND OF THE MERRIWA PLATEAU

TREES

<i>Ailanthus altissima</i>	Simaroubaceae	tree of heaven	X	✓	X	✓	X	✓	cultivated areas, suckering habit	tree to 8 m	throughout catchment	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
<i>Salix babylonica</i>	Salicaceae	weeping willow	X	✓	X	✓	X	X	along streams & around dams	spreading, weeping tree to 20 m	throughout catchment	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
<i>Salix fragilis</i> var. <i>fragilis</i>	Salicaceae	crack willow	X	✓	✓	✓	X	X	along rivers, streams & dams	tree to 18 m	upper Hunter	✓	✓	✓	✓	✓	✓	X	X	X	X	X
<i>Salix X. sepulcralis</i> var. <i>chrysocoma</i>	Salicaceae	golden weeping willow	X	✓	✓	✓	X	X	along rivers, streams & dams	weeping tree to 18 m	throughout catchment	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

SHRUBS

<i>Lycium ferocissimum</i>	Solanaceae	African boxthorn	X	✓	✓	✓	✓	✓	pastures, urban wastelands & some remnant vegetation	shrub to 4 m	throughout catchment	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
<i>Nicotiana glauca</i>	Solanaceae	tree tobacco	X	✓	X	✓	X	X	open disturbed areas, widely distributed	erect tree-like shrub to 6 m	throughout catchment	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
<i>Rosa rubiginosa</i>	Rosaceae	sweet briar	X	✓	✓	✓	✓	✓	widespread, mostly in agricultural habitats	erect scrambling shrub	throughout most of catchment	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

GRASSES

<i>Bromus brevis</i>	Poaceae	brome	X	✓	X	✓	✓	✓	disturbed areas	biennial, rhizomatous to 0.6 m	upper catchment	✓	✓	✓	✓	✓	✓	X	X	X	X	X
<i>Chloris gayana</i>	Poaceae	Rhodes grass	X	✓	X	✓	✓	✓	pasture species invading roadsides & some remnant bushland	erect perennial to 1.2 m	throughout catchment	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
<i>Hyparrhina hirta</i>	Poaceae	Coolatai grass	X	✓	X	✓	✓	✓	dry woodland, grassland, roadsides	tufted perennial to 1.2 m	lower & upper Hunter & Central Coast	✓	✓	✓	✓	✓	✓	✓	X	X	✓	X

Scientific name	Family	Common name	Weed type					Environment and habitat in catchment	Habit and growth form	Distribution	Bystone	Mudgee	Merrima	Murrumbidgee	Scone	Muswellbrook	Singleton	Maitland	Dungog	Cessnock	Port Stephens	Newcastle
			Native	Introduced	Noxious	Environmental	Agricultural															
<i>Trifolium repens</i>	Fabaceae	white clover	X	✓	X	✓	X	✓	cultivated areas, lawns, pastures	perennial to 30 cm	throughout catchment	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
<i>Verbena bonariensis</i>	Verbenaceae	purple top	X	✓	X	✓	✓	✓	invasive weed in wastelands & cultivated areas	perennial herb 0.6–2 m	throughout catchment	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
<i>Xanthium occidentale</i>	Asteraceae	Noogoora burr	X	✓	✓	✓	✓	✓	rivers, creeks, flats, after flooding, disturbed areas	herb to 2 m	throughout catchment	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
<i>Xanthium spinosum</i>	Asteraceae	Bathurst burr	X	✓	✓	✓	✓	✓	agricultural ground, disturbed areas, most soil types	herb to 1 m	throughout catchment	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

VINES, CLIMBERS AND TWINERS

<i>Vicia sativa</i> ssp. <i>angustifolia</i> = <i>V. sativa</i> ssp. <i>nigra</i>	Fabaceae	narrow-leaved vetch	X	✓	X	✓	✓	X	mostly pasture & woodland	trailing or climbing annual herb	throughout catchment	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
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7 FORESTS OF DISSECTED SANDSTONE PLATEAUX AND SUBCOASTAL SANDSTONE HILLS

TREES

<i>Ailanthus altissima</i>	Simaroubaceae	tree of heaven	X	✓	X	✓	X	✓	cultivated areas, suckering habit	tree to 8 m	throughout catchment	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
<i>Salix babylonica</i>	Salicaceae	weeping willow	X	✓	X	✓	X	X	along streams & around dams	spreading, weeping tree to 20 m	throughout catchment	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
<i>Salix fragilis</i> var. <i>fragilis</i>	Salicaceae	crack willow	X	✓	✓	✓	X	X	along rivers, streams & dams	tree to 18 m	upper Hunter	✓	✓	✓	✓	✓	X	X	X	X	X	X
<i>Salix humboldtiana</i> 'Pyramidalis'	Salicaceae	pencil willow	X	✓	✓	✓	X	X	along rivers, streams & dams	tree to 15 m	lower Hunter	X	X	X	X	X	✓	✓	✓	✓	✓	✓
<i>Salix nigra</i>	Salicaceae	black willow	X	✓	✓	✓	X	X	rivers & roadside ditches	spreading shrub or tree to 20 m	lower Hunter	X	X	X	X	X	X	✓	✓	✓	✓	✓
<i>Salix X sepulcralis</i> var. <i>chrysocoma</i>	Salicaceae	golden weeping willow	X	✓	✓	✓	X	X	along rivers, streams & dams	weeping tree to 18 m	throughout catchment	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

SHRUBS

<i>Ageratina adenophora</i>	Asteraceae	crofton weed	X	✓	¹	✓	✓	✓	disturbed moist sites, fertile soils	erect herb 1–2 m	lower Hunter	X	X	X	X	X	X	✓	✓	✓	✓	✓
<i>Lantana camara</i>	Verbenaceae	lantana	X	✓	C	✓	✓	✓	sclerophyll forest & disturbed rainforest, coastal districts	shrub up to c. 3 m	lower and mid-Hunter, slowly advancing west	X	X	X	X	X	✓	✓	✓	✓	✓	✓
<i>Rubus ulmifolius</i>	Rosaceae	blackberry	X	✓	✓	✓	✓	✓	mostly agricultural land & riparian areas	semi-deciduous shrub to 2 m	upper Hunter	✓	✓	✓	✓	✓	✓	✓	X	✓	X	X

GRASSES

<i>Melinis repens</i>	Poaceae	red Natal grass	X	✓	X	✓	X	✓	mostly roadsides	tufted perennial to 1.2 m	throughout catchment	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
<i>Paspalum dilatatum</i>	Poaceae	paspalum	X	✓	X	✓	X	✓	pastures, lawns, disturbed areas	tufted perennial to 2 m	throughout catchment	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
<i>Setaria gracilis</i>	Poaceae	slender pigeon grass	X	✓	X	✓	X	✓	roadsides, disturbed areas	tufted perennial to 1.2 m	throughout catchment	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

SEDGES

<i>Cyperus aggregatus</i>	Cyperaceae	sedge	X	✓	X	✓	X	X	sandy soils	tufted perennial, culms 5–60 cm	lower Hunter	X	X	X	X	X	X	✓	✓	✓	✓	✓
<i>Cyperus eragrostis</i>	Cyperaceae	umbrella sedge	X	✓	X	✓	✓	X	wet areas, open disturbed areas	tufted perennial sedge, culms 25–90 cm	throughout catchment	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

HERBS

<i>Anagallis arvensis</i>	Primulaceae	pimpernel	X	✓	X	✓	X	✓	pastures, disturbed sites, creek banks	perennial or annual herb	throughout catchment	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
<i>Arctotheca calendula</i>	Asteraceae	Cape weed	X	✓	X	✓	✓	X	a weed of pastures & cultivation	stemless annual herb to 30 cm	throughout catchment	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
<i>Bidens pilosa</i>	Asteraceae	cobbler's pegs	X	✓	X	✓	X	✓	disturbed areas	hairy woody herb to 1 m	throughout catchment	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
<i>Carduus pycnocephalus</i>	Asteraceae	slender thistle	X	✓	X	✓	✓	✓	pastures, roadsides, wastelands, cultivated areas	annual herb to 80 cm	throughout catchment	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
<i>Carduus tenuiflorus</i>	Asteraceae	winged slender thistle	X	✓	X	✓	✓	✓	pastures, roadsides, wastelands, cultivated areas	annual herb 50–150 cm	throughout catchment	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
<i>Cirsium vulgare</i>	Asteraceae	spear thistle	X	✓	X	✓	✓	✓	wastelands, cultivated areas, roadsides	erect herb to 1.5 m	throughout catchment	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

¹ Cessnock/Maitland/Newcastle/Port Stephens

Scientific name	Family	Common name	Weed type						Environment and habitat in catchment	Habit and growth form	Distribution	Rylstone	Mudgee	Merriwa	Murrumbidgee	Stone	Muswellbrook	Singleton	Maitland	Dungog	Cessnock	Port Stephens	Newcastle
			Native	Introduced	Noxious	Environmental	Agricultural	Amenity															
<i>Conyza sumatrensis</i> = <i>C. albid</i>	Asteraceae	tall fleabane	X	✓	X	✓	✓	X	pasture, wastelands, cultivation	erect annual herb to 2 m	throughout catchment	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
<i>Fumaria muralis</i> ssp. <i>muralis</i>	Fumariaceae	wall fumitory	X	✓	X	✓	X	X	wastelands & cultivated areas	delicate herb	throughout catchment	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
<i>Gomphocarpus fruticosus</i> = <i>Asclepias fruticosa</i>	Asclepiadaceae	narrow-leaved cotton bush	X	✓	X	✓	✓	X	waste places, river banks	shrub 0.5–2 m	throughout catchment	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
<i>Heliotropium amplexicaule</i>	Boraginaceae	blue heliotrope	X	✓	X	✓	✓	✓	roadsides, pastures	perennial herb up to 15 cm	throughout catchment	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
<i>Hypericum perforatum</i>	Clusiaceae	St John's wort	X	✓	✓	✓	✓	✓	disturbed places, including roadsides & pastures	erect herb 10–40 cm	mid and upper Hunter	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	X	X
<i>Hypochaeris radicata</i>	Asteraceae	cat's ear	X	✓	X	✓	✓	✓	lawns, gardens, roadsides, pastures, disturbed habitats	perennial herb, 15–80 cm	throughout catchment	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
<i>Lepidium africanum</i>	Brassicaceae	common peppergrass	X	✓	X	X	✓	X	widespread in a variety of habitats	perennial herb to 70 cm	throughout catchment	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
<i>Opuntia aurantiaca</i>	Cactaceae	tiger pear	X	✓	✓	✓	✓	✓	occurs in a wide variety of habitats	low-growing plant, 4–10 cm	throughout catchment	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
<i>Opuntia stricta</i> var. <i>stricta</i>	Cactaceae	prickly pear	X	✓	✓	✓	✓	✓	occurs in a wide variety of habitats	bushy clumped plant, <1.5 m	throughout catchment	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
<i>Petrorhagia nanteuilii</i>	Caryophyllaceae	velvet pink	X	✓	X	X	✓	X	pasture & disturbed ground	herb to 60 cm	throughout catchment	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
<i>Plantago lanceolata</i>	Plantaginaceae	lamb's tongues	X	✓	X	✓	✓	✓	disturbed sites & pastures	annual herb	throughout catchment	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
<i>Prunella vulgaris</i>	Lamiaceae	self-heal	X	✓	X	✓	X	✓	widespread, disturbed areas, roadsides, moist sites	decumbent perennial herb with branches to 50 cm	throughout catchment, primarily rainforests in Wollemi NP	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
<i>Senecio madagascariensis</i>	Asteraceae	fireweed	X	✓	X	✓	✓	✓	pasture & disturbed sites in coastal districts	annual herb, 20–60 cm	throughout catchment	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
<i>Sida rhombifolia</i>	Malvaceae	Paddy's lucerne	X	✓	X	✓	✓	✓	gardens, roadsides, wastelands	erect subshrub to c.1 m	throughout catchment	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
<i>Silybum marianum</i>	Asteraceae	variegated thistle	X	✓	X	✓	✓	✓	cultivated areas, pastures, roadsides, disturbed areas	biennial herb to 2.5 m	throughout catchment	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
<i>Sonchus oleraceus</i>	Asteraceae	milk thistle	X	✓	X	✓	✓	✓	cultivation, pastures & disturbed areas	annual herb 30–110 cm	throughout catchment	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
<i>Taraxacum officinale</i>	Asteraceae	dandelion	X	✓	X	✓	✓	✓	lawns, roadsides, wasteland & pastures	perennial herb 5–40 cm	throughout catchment	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
<i>Trifolium arvense</i>	Fabaceae	hares-foot clover	X	✓	X	✓	X	✓	cultivated areas, lawns, disturbed sites, pastures	erect annual to 40 cm	throughout catchment	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
<i>Urtica urens</i>	Urticaceae	small nettle	X	✓	X	✓	✓	✓	sheltered sites	annual herb to 60 cm	throughout catchment	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
<i>Verbascum virgatum</i>	Scrophulariaceae	twiggy mullein	X	✓	X	✓	✓	X	disturbed sites, roadsides, habitations	erect biennial herb 1–2 m	throughout catchment	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
<i>Verbena bonariensis</i>	Verbenaceae	purple top	X	✓	X	✓	✓	✓	invasive weed in wastelands & cultivated areas	perennial herb 0.6–2 m	throughout catchment	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
VINES, CLIMBERS AND TWINERS																							
<i>Araujia sericifera</i> = <i>A. hortorum</i>	Asclepiadaceae	moth plant	X	✓	X	✓	X	✓	disturbed sites	climber stems to 5 m	throughout catchment west to Muswellbrook	X	X	X	X	✓	✓	✓	✓	✓	✓	✓	✓
<i>Delairea odorata</i>	Asteraceae	Cape ivy	X	✓	X	✓	X	✓	moist gullies in coastal districts	perennial twiner with stems to 3 m	coastal and subcoastal moist gullies	X	X	X	X	X	X	X	X	X	X	✓	✓
<i>Passiflora edulis</i>	Passifloraceae	common passionfruit	X	✓	X	✓	X	X	edge of rainforest & moist gullies	climber	lower Hunter and west to Muswellbrook	X	X	X	X	X	✓	✓	✓	✓	✓	✓	✓
<i>Tradescantia albiflora</i>	Commelinaceae	wandering Jew	X	✓	X	✓	X	✓	creek banks, shaded places, esp. rainforest	perennial succulent herb	lower Hunter and in upper Hunter urban bushland	X	X	X	X	X	✓	✓	✓	✓	✓	✓	✓
8 FRESH-WATER WETLANDS																							
SHRUBS																							
<i>Chrysanthemoides monillifera</i> ssp. <i>rotundata</i>	Asteraceae	bitou bush	X	✓	¹	✓	X	✓	disturbed coastal sites	erect shrub to 1.5 m	coastal areas	X	X	X	X	X	X	X	X	X	X	✓	✓
<i>Lantana camara</i>	Verbenaceae	lantana	X	✓	C	✓	✓	✓	sclerophyll forest & disturbed rainforest, coastal districts	shrub up to c.3 m	lower & mid-Hunter, slowly advancing west	X	X	X	X	X	✓	✓	✓	✓	✓	✓	✓
<i>Rubus ulmifolius</i>	Rosaceae	blackberry	X	✓	✓	✓	✓	✓	mostly agricultural land & riparian areas	semi-deciduous shrub to 2 m	upper Hunter	✓	✓	✓	✓	✓	✓	✓	X	✓	X	X	X
<i>Solanum pseudocapsicum</i>	Solanaceae	Madeira winter cherry	X	✓	X	✓	✓	X	moist soils, coastal districts, rainforest regrowth	shrub to 2 m	throughout catchment	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

¹Newcastle/Port Stephens

Scientific name	Family	Common name	Weed type						Environment and habitat in catchment	Habit and growth form	Distribution	Rylstone	Mudgee	Merriva	Murrumbidgee	Stone	Muswellbrook	Singleton	Maitland	Dungog	Cessnock	Port Stephens	Newcastle
			Native	Introduced	Noxious	Environmental	Agricultural	Amenity															
SUBMERGED HERBS																							
<i>Callitriche stagnalis</i>	Callitricaceae	common starwort	X	✓	X	✓	X	✓	submerged aquatic, also grows on damp ground	spreading, submerged or mat-like semi-aquatic herb	lower Hunter	X	X	X	X	X	X	X	X	✓	X	✓	
<i>Egeria densa</i>	Hydrocharitaceae	dense waterweed	X	✓	X	✓	X	✓	stationary, slow-flowing water, esp. where substrate is disturbed	submerged aquatic, perennial, stems to 1.5 m	lower Hunter	X	X	X	X	X	X	X	X	✓	X	✓	
TERRESTRIAL HERBS																							
<i>Anagallis arvensis</i>	Primulaceae	pimpernel	X	✓	X	✓	X	✓	pastures, disturbed sites, creek banks	perennial or annual herb	throughout catchment	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
<i>Alternanthera philoxeroides</i>	Amaranthaceae	alligator weed	X	✓	✓	✓	✓	✓	floating or rooted mats in aquatic inundated land	aquatic & terrestrial perennial herb	lower Hunter	X	X	X	X	X	X	X	✓	✓	✓	✓	✓
<i>Ambrosia tenuifolia</i>	Asteraceae	lacy ragweed	X	✓	X	✓	X	✓	roadsides, wastelands, creeks, channel banks	erect perennial herb to 75 cm	throughout catchment	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
<i>Aster subulatus</i>	Asteraceae	wild aster	X	✓	X	✓	✓	✓	poorly drained land & damp areas	annual, biennial or short-lived perennial herb 0.3–18 m	throughout catchment	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
<i>Berula erecta</i>	Apiaceae	water parsnip	X	✓	X	✓	X	X	swamp areas, shallow water lakes	perennial herb 30–100 cm	throughout catchment	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
<i>Bidens pilosa</i>	Asteraceae	cobbler's pegs	X	✓	X	✓	X	✓	disturbed areas	hairy woody herb to 1 m	throughout catchment	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
<i>Chenopodium album</i>	Chenopodiaceae	fat hen	X	✓	X	✓	✓	✓	mostly in disturbed areas	erect annual herb to 2.5 m	throughout catchment	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
<i>Ciclospermum leptophyllum</i>	Apiaceae	slender celery	X	✓	X	✓	X	X	gardens, roadsides & other disturbed areas	erect annual herb 15–70 cm	throughout catchment	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
<i>Cirsium vulgare</i>	Asteraceae	spear thistle	X	✓	X	✓	✓	✓	wastelands, cultivated areas, roadsides	erect herb to 1.5 m	throughout catchment	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
<i>Conyza sumatrensis</i> = <i>C. albida</i>	Asteraceae	tall fleabane	X	✓	X	✓	X	X	pasture, wastelands, cultivation	erect annual herb to 2 m	throughout catchment	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
<i>Cotula coronopifolia</i>	Asteraceae	water buttons	X	✓	X	✓	X	X	damp, often saline disturbed communities	erect to spreading annual herb usually c. 20 cm	lower Hunter	X	X	X	X	X	X	X	✓	✓	✓	✓	✓
<i>Galenia pubescens</i>	Aizoaceae	galenia	X	✓	X	✓	✓	✓	weed of cultivation, mines & roadsides	prostrate woody herb	throughout catchment	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
<i>Hydrocotyle bonariensis</i>	Apiaceae	pennywort	X	✓	X	✓	X	X	coloniser of sand dunes	perennial herb, leaves 30–120 mm dia	coastal areas	X	X	X	X	X	X	X	X	X	✓	✓	✓
<i>Hypochaeris radicata</i>	Asteraceae	cat's ear	X	✓	X	✓	✓	✓	lawns, gardens, roadsides, pastures, disturbed habitats	perennial herb, 15–80 cm	throughout catchment	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
<i>Lactuca serriola</i>	Asteraceae	prickly lettuce	X	✓	X	✓	✓	✓	gardens, roadsides, wasteland, cultivated, degraded pastures	biennial 1–2 m	throughout catchment	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
<i>Lepidium africanum</i>	Brassicaceae	common peppercress	X	✓	X	X	✓	X	widespread in a variety of habitats	perennial herb to 70 cm	throughout catchment	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
<i>Mellilotus indicus</i>	Fabaceae	Hexham scent	X	✓	X	✓	✓	✓	pastures, open forest, riparian areas	erect annual herb to 60 cm	throughout catchment, but mostly lower Hunter	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
<i>Modiola caroliniana</i>	Malvaceae	red-flowered mallow	X	✓	X	✓	✓	X	gardens & waste places	perennial herb usually under 25 cm	throughout catchment	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
<i>Oxalis corniculata</i>	Oxalidaceae	creeping oxalis	X	✓	X	✓	X	✓	gardens, parks	erect or creeping herb with stems to 30 cm	coastal areas	X	X	X	X	X	X	X	X	X	✓	✓	✓
<i>Phytolacca octandra</i>	Phytolaccaceae	inkweed	X	✓	X	✓	✓	✓	moist areas	herb 1–2 m	throughout catchment	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
<i>Plantago lanceolata</i>	Plantaginaceae	lamb's tongues	X	✓	X	✓	✓	✓	disturbed sites & pastures	annual herb	throughout catchment	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
<i>Plantago major</i>	Plantaginaceae	large plantain	X	✓	X	✓	X	X	creek banks & seepage lines on sandy or gravelly soil	perennial herb	throughout catchment	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
<i>Polygonum aviculare</i>	Polygonaceae	wireweed	X	✓	X	✓	✓	✓	occurs in disturbed moist habitats	prostrate herb with stems to 100 cm	throughout catchment	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
<i>Ranunculus scleratus</i>	Ranunculaceae	celery buttercup	X	✓	X	✓	X	X	wet mud, poorly drained pasture lands	annual herb	lower Hunter	X	X	X	X	X	X	X	✓	✓	✓	✓	✓
<i>Rumex crispus</i>	Polygonaceae	curled dock	X	✓	X	✓	✓	X	cultivated areas, pastures, roadsides, disturbed areas	robust perennial herb 50–150 cm	throughout catchment	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
<i>Senecio madagascariensis</i>	Asteraceae	fireweed	X	✓	X	✓	✓	✓	pasture & disturbed sites in coastal districts	annual herb, 20–60 cm	throughout catchment	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
<i>Sida rhombifolia</i>	Malvaceae	Paddy's lucerne	X	✓	X	✓	✓	✓	gardens, roadsides, wastelands	erect shrub to c. 1 m	throughout catchment	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
<i>Silybum marianum</i>	Asteraceae	variegated thistle	X	✓	X	✓	✓	✓	cultivated areas, pastures, roadsides, disturbed areas	biennial herb to 2.5 m	throughout catchment	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
<i>Solanum nigrum</i>	Solanaceae	blackberry nighshade	X	✓	X	✓	✓	✓	widespread near habitations or horticultural crops	herb or short-lived perennial shrub	throughout catchment	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
<i>Sonchus oleraceus</i>	Asteraceae	milk thistle	X	✓	X	✓	✓	✓	cultivation, pastures & disturbed areas	annual herb 30–110 cm	throughout catchment	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
<i>Stachys arvensis</i>	Lamiaceae	stagger weed	X	✓	X	✓	✓	✓	widespread in disturbed areas	annual herb to 35 cm	throughout catchment	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
<i>Stellaria media</i>	Caryophyllaceae	common chickweed	X	✓	X	✓	X	X	weed of cultivation, also sheltered sites in remnant vegetation	annual or biennial herb	throughout catchment	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
<i>Tagetes minuta</i>	Asteraceae	stinking Roger	X	✓	X	✓	X	✓	roadsides & disturbed sites, riverbanks, woodlands	annual herb 3–2 m	throughout catchment	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
<i>Taraxacum officinale</i>	Asteraceae	dandelion	X	✓	X	✓	✓	✓	lawns, roadsides, wasteland & pastures	perennial herb 5–40 cm	throughout catchment	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

Scientific name	Family	Common name	Weed type						Environment and habitat in catchment	Habit and growth form	Distribution	Bystone	Mudgee	Merrima	Murrumbidgee	Scone	Muswellbrook	Singleton	Maitland	Dungog	Cessnock	Port Stephens	Newcastle
			Native	Introduced	Noxious	Environmental	Agricultural	Amenity															
<i>Trifolium repens</i>	Fabaceae	white clover	X	✓	X	✓	X	✓	cultivated areas, lawns, pastures	perennial to 30 cm	throughout catchment	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
<i>Urtica urens</i>	Urticaceae	small nettle	X	✓	X	✓	✓	✓	sheltered sites	annual herb to 60 cm	throughout catchment	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
VINES, CLIMBERS AND TWINERS																							
<i>Tradescantia albiflora</i>	Commelinaceae	wandering Jew	X	✓	X	✓	X	✓	creek banks, shaded places, esp. rainforest	perennial succulent herb	lower Hunter and in upper Hunter urban bushland	X	X	X	X	X	✓	✓	✓	✓	✓	✓	✓
<i>Vicia sativa</i> ssp. <i>angustifolia</i> = <i>V. sativa</i> ssp. <i>nigra</i>	Fabaceae	narrow-leaved vetch	X	✓	X	✓	✓	X	mostly pasture & woodland	trailing or climbing annual herb	throughout catchment	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓