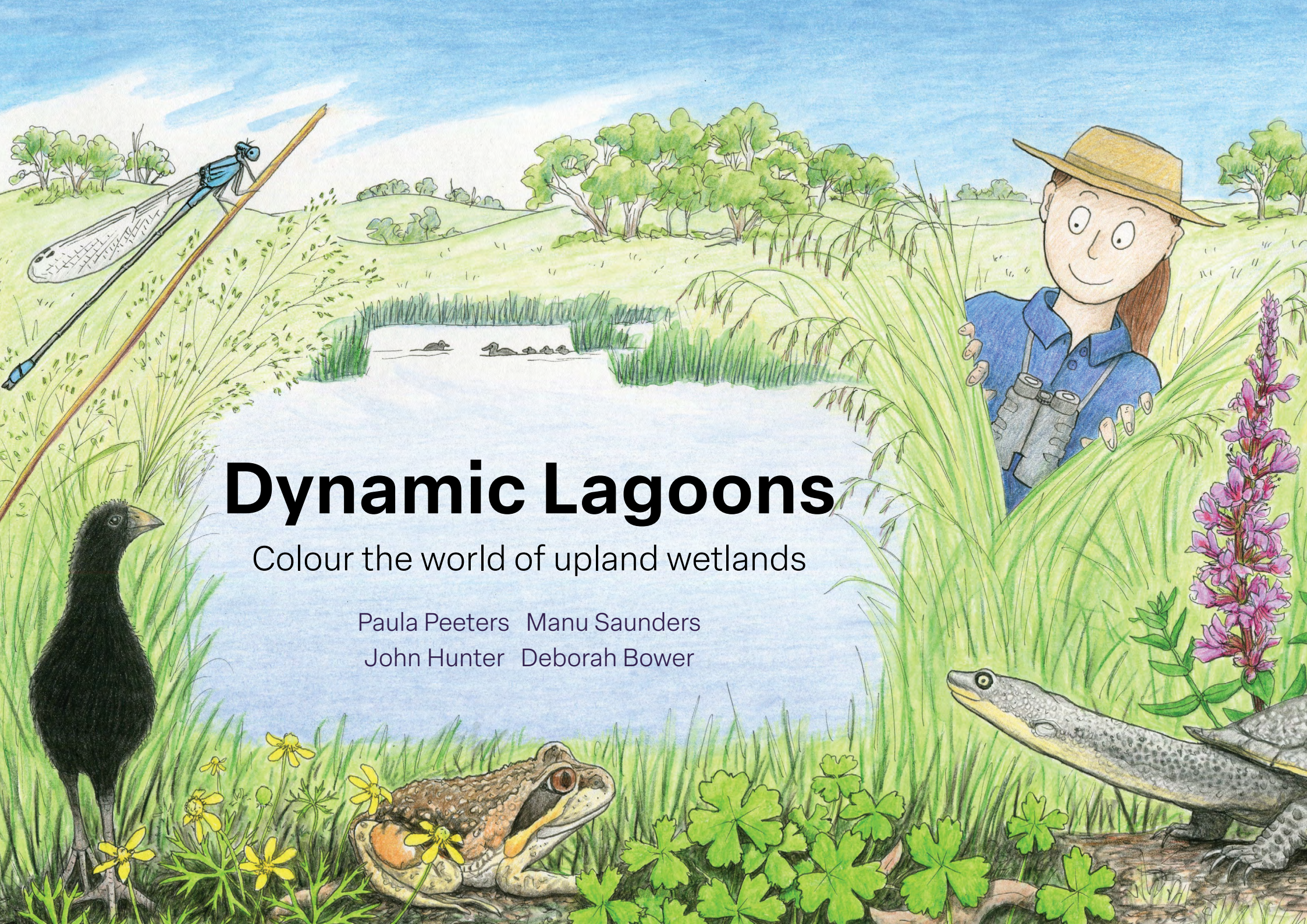
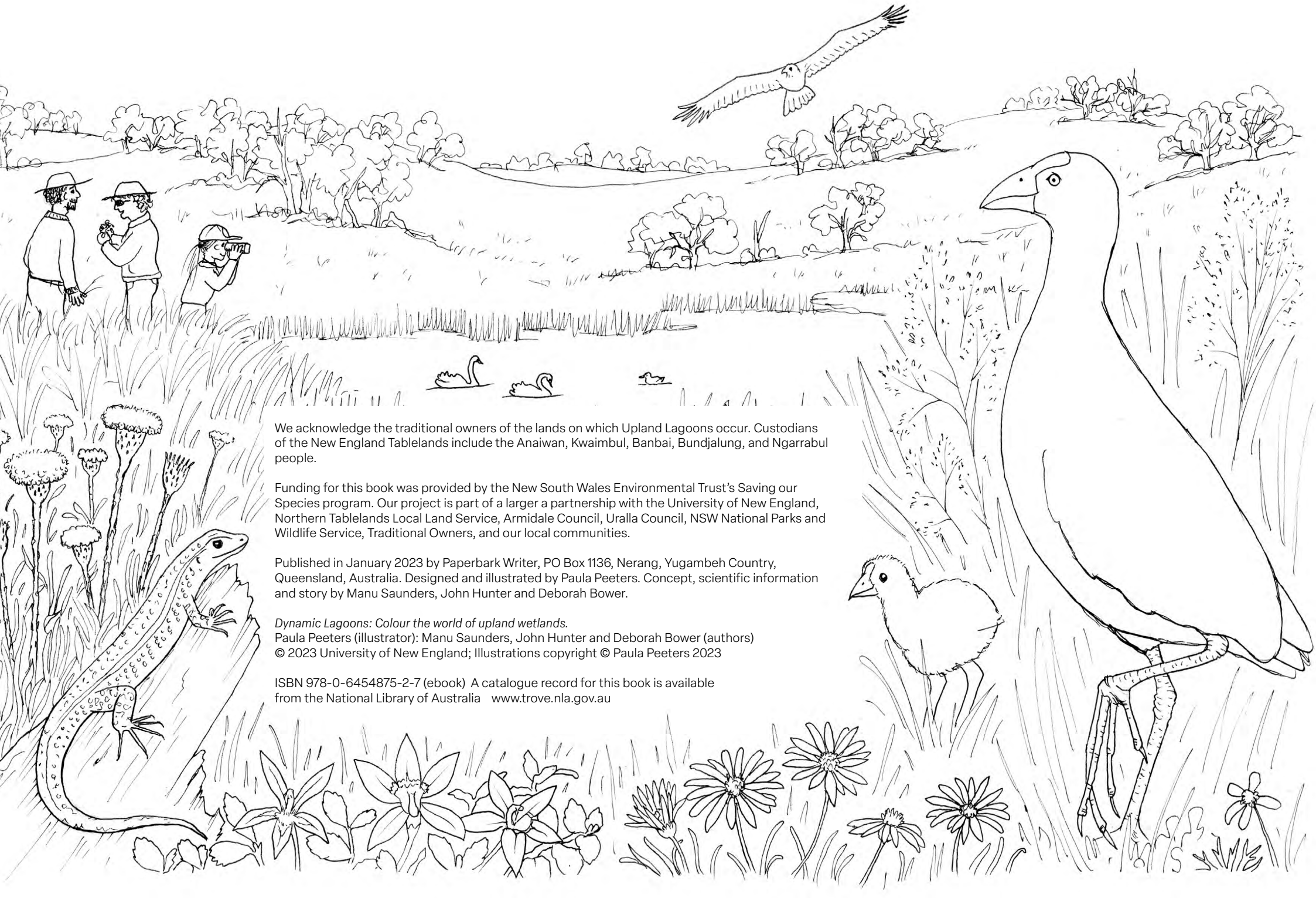


Dynamic Lagoons

Colour the world of upland wetlands

Paula Peeters Manu Saunders
John Hunter Deborah Bower



We acknowledge the traditional owners of the lands on which Upland Lagoons occur. Custodians of the New England Tablelands include the Anaiwan, Kwaimbul, Banbai, Bundjalung, and Ngarrabul people.

Funding for this book was provided by the New South Wales Environmental Trust's Saving our Species program. Our project is part of a larger a partnership with the University of New England, Northern Tablelands Local Land Service, Armidale Council, Uralla Council, NSW National Parks and Wildlife Service, Traditional Owners, and our local communities.

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Dynamic Lagoons: Colour the world of upland wetlands.
Paula Peeters (illustrator): Manu Saunders, John Hunter and Deborah Bower (authors)

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Dynamic Lagoons

Colour the world of upland wetlands

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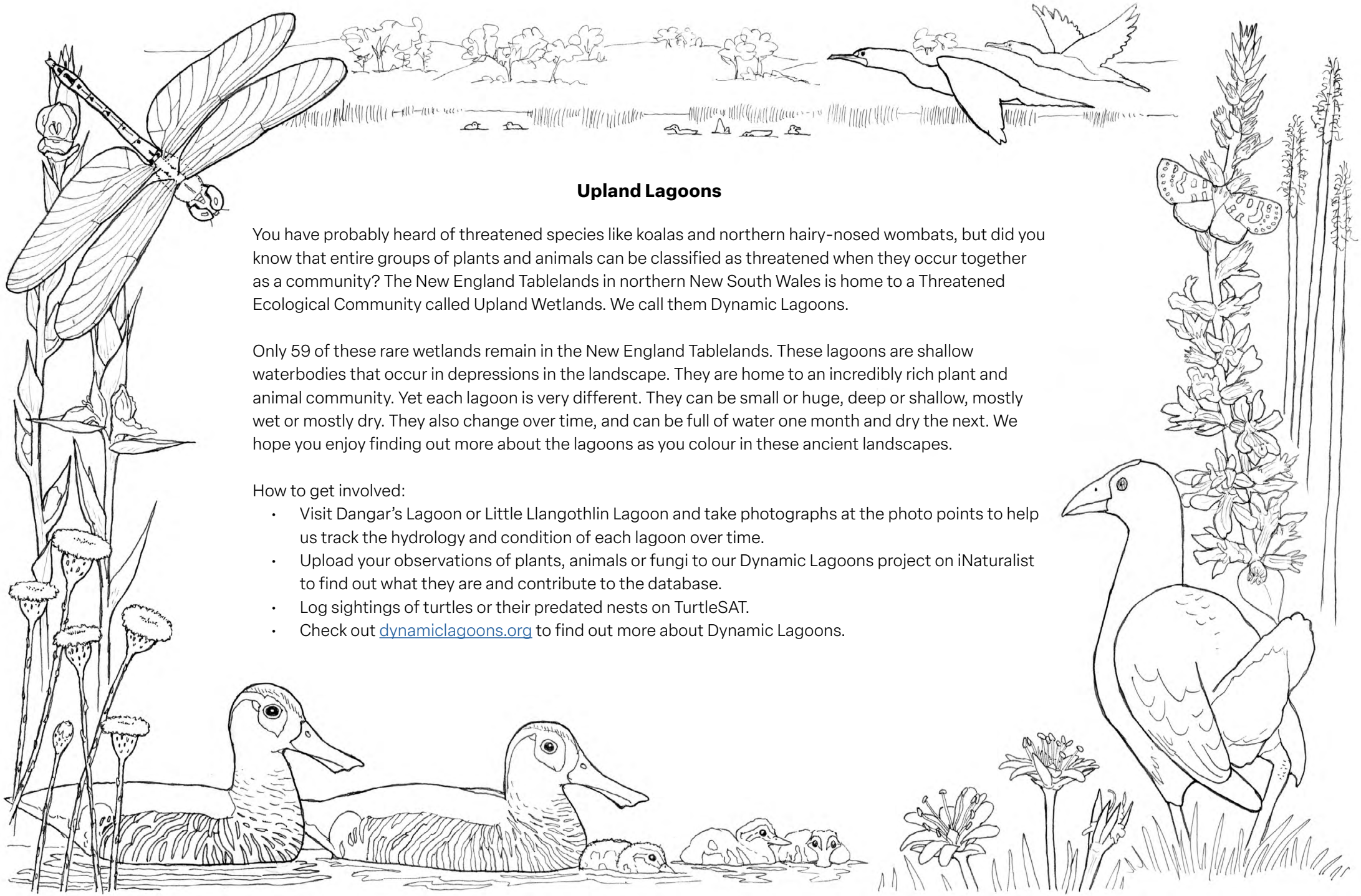


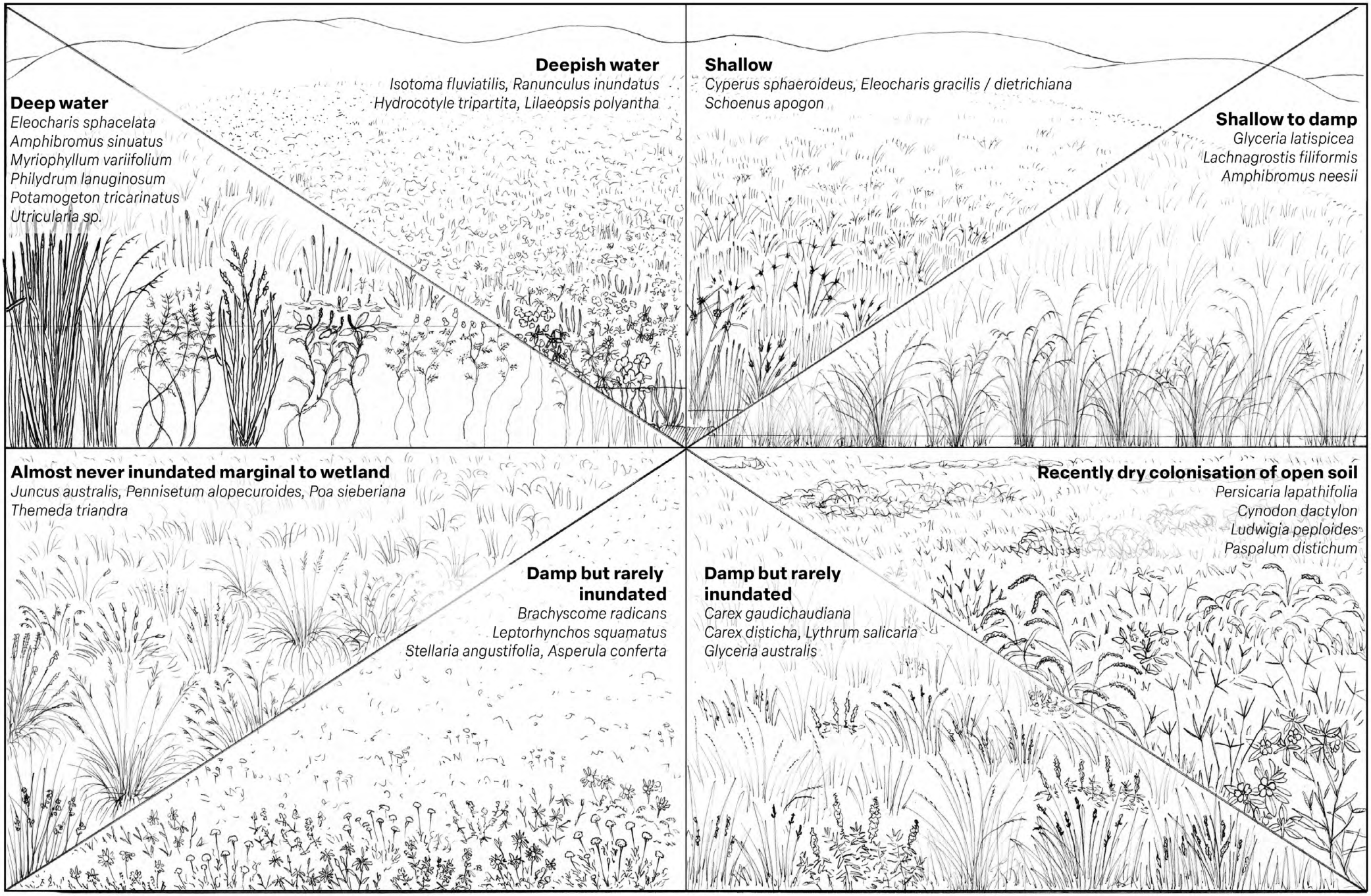
Upland Lagoons

You have probably heard of threatened species like koalas and northern hairy-nosed wombats, but did you know that entire groups of plants and animals can be classified as threatened when they occur together as a community? The New England Tablelands in northern New South Wales is home to a Threatened Ecological Community called Upland Wetlands. We call them Dynamic Lagoons.

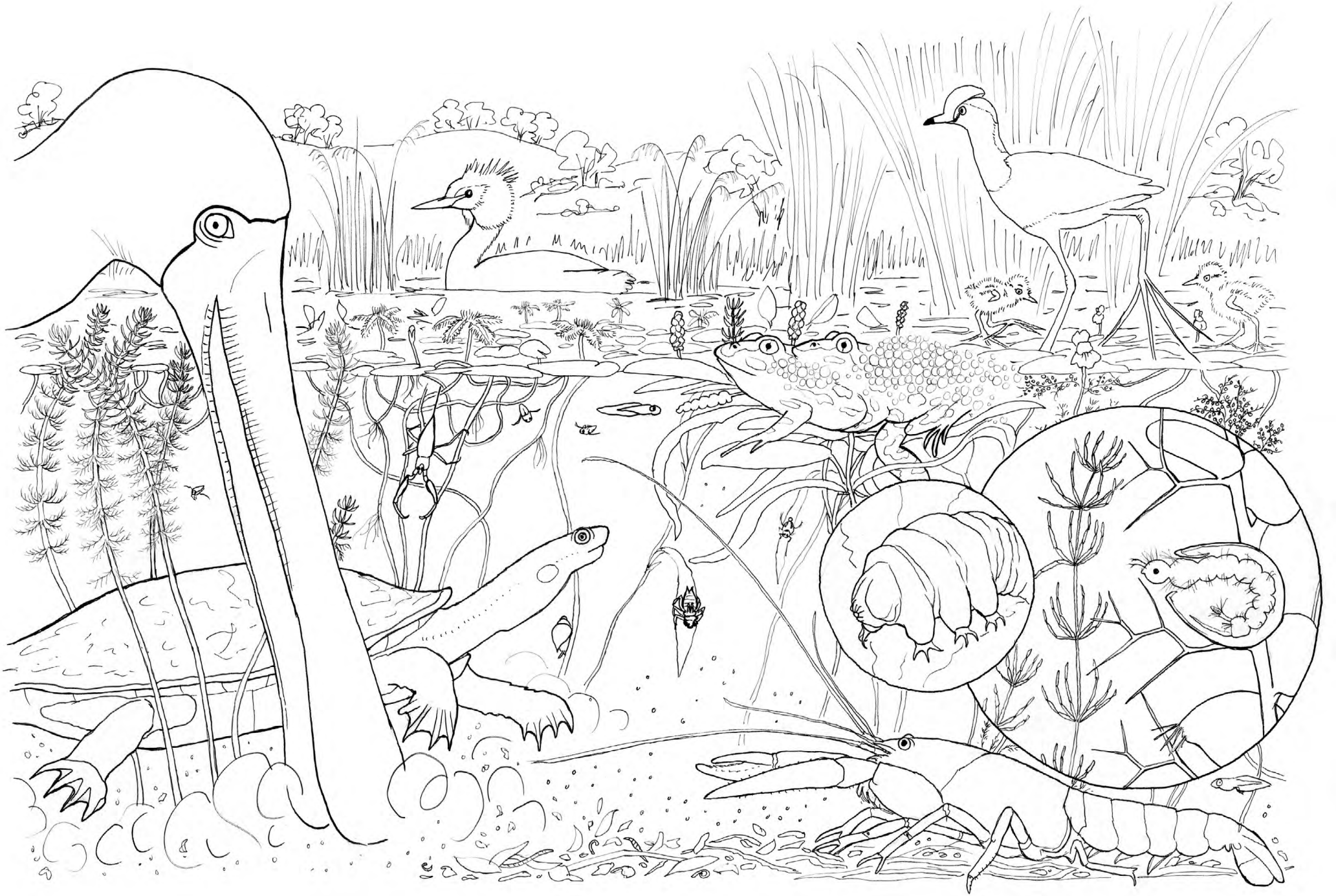
Only 59 of these rare wetlands remain in the New England Tablelands. These lagoons are shallow waterbodies that occur in depressions in the landscape. They are home to an incredibly rich plant and animal community. Yet each lagoon is very different. They can be small or huge, deep or shallow, mostly wet or mostly dry. They also change over time, and can be full of water one month and dry the next. We hope you enjoy finding out more about the lagoons as you colour in these ancient landscapes.

How to get involved:

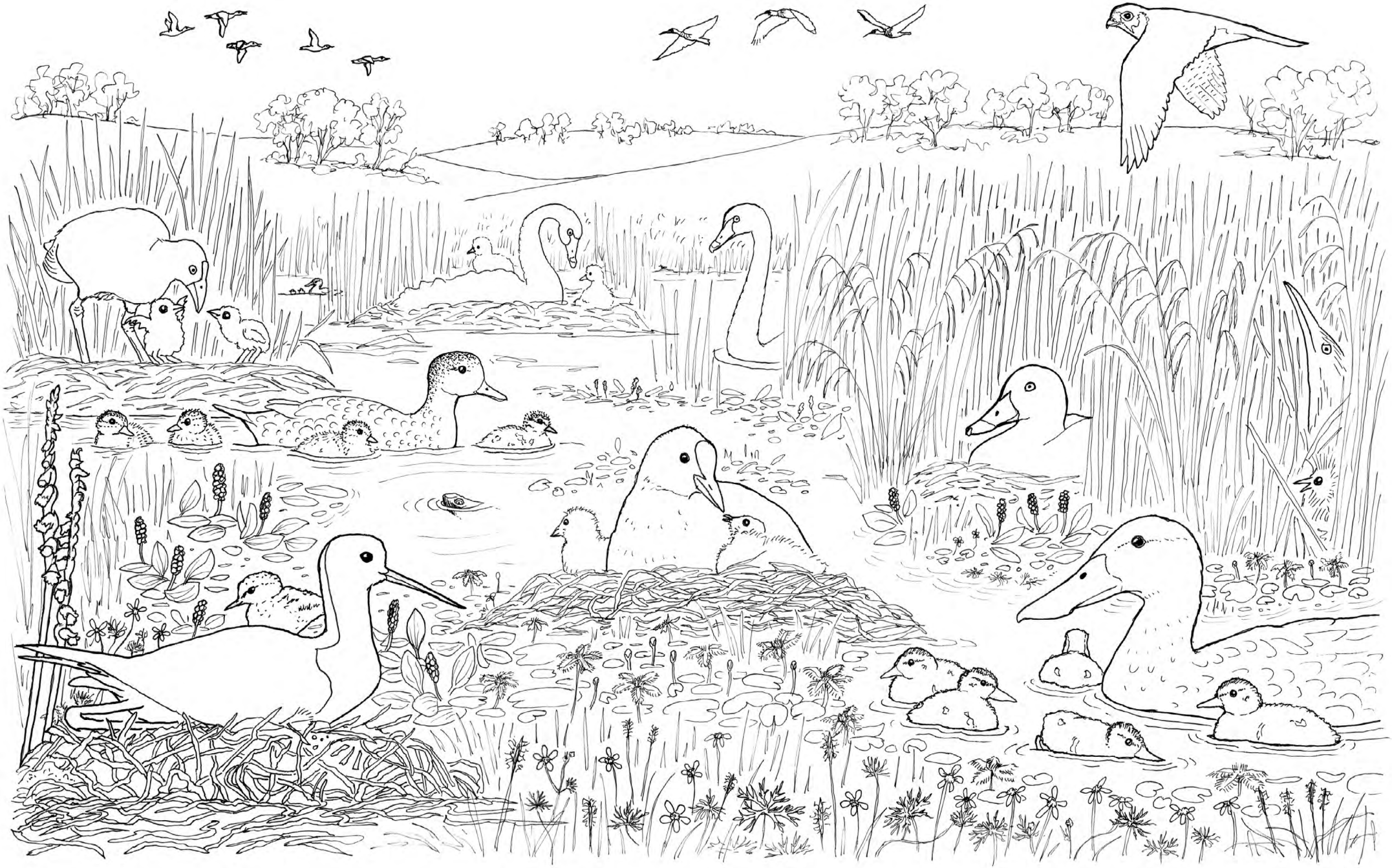
- Visit Dangar's Lagoon or Little Llangothlin Lagoon and take photographs at the photo points to help us track the hydrology and condition of each lagoon over time.
- Upload your observations of plants, animals or fungi to our Dynamic Lagoons project on iNaturalist to find out what they are and contribute to the database.
- Log sightings of turtles or their predated nests on TurtleSAT.
- Check out dynamiclagoons.org to find out more about Dynamic Lagoons.


Deep water
Eleocharis sphacelata
Amphibromus sinuatus
Myriophyllum variifolium
Philydrum lanuginosum
Potamogeton tricarinatus
Utricularia sp.
Deepish water
Isotoma fluviatilis, Ranunculus inundatus
Hydrocotyle tripartita, Lilaeopsis polyantha
Shallow
Cyperus sphaeroideus, Eleocharis gracilis / dietrichiana
Schoenus apogon
Shallow to damp
Glyceria latispicea
Lachnagrostis filiformis
Amphibromus neesii
Almost never inundated marginal to wetland
Juncus australis, Pennisetum alopecuroides, Poa sieberiana
Themeda triandra
Damp but rarely inundated
Brachyscome radicans
Leptorhynchos squamatus
Stellaria angustifolia, Asperula conferta
Damp but rarely inundated
Carex gaudichaudiana
Carex disticha, Lythrum salicaria
Glyceria australis
Recently dry colonisation of open soil
Persicaria lapathifolia
Cynodon dactylon
Ludwigia peploides
Paspalum distichum

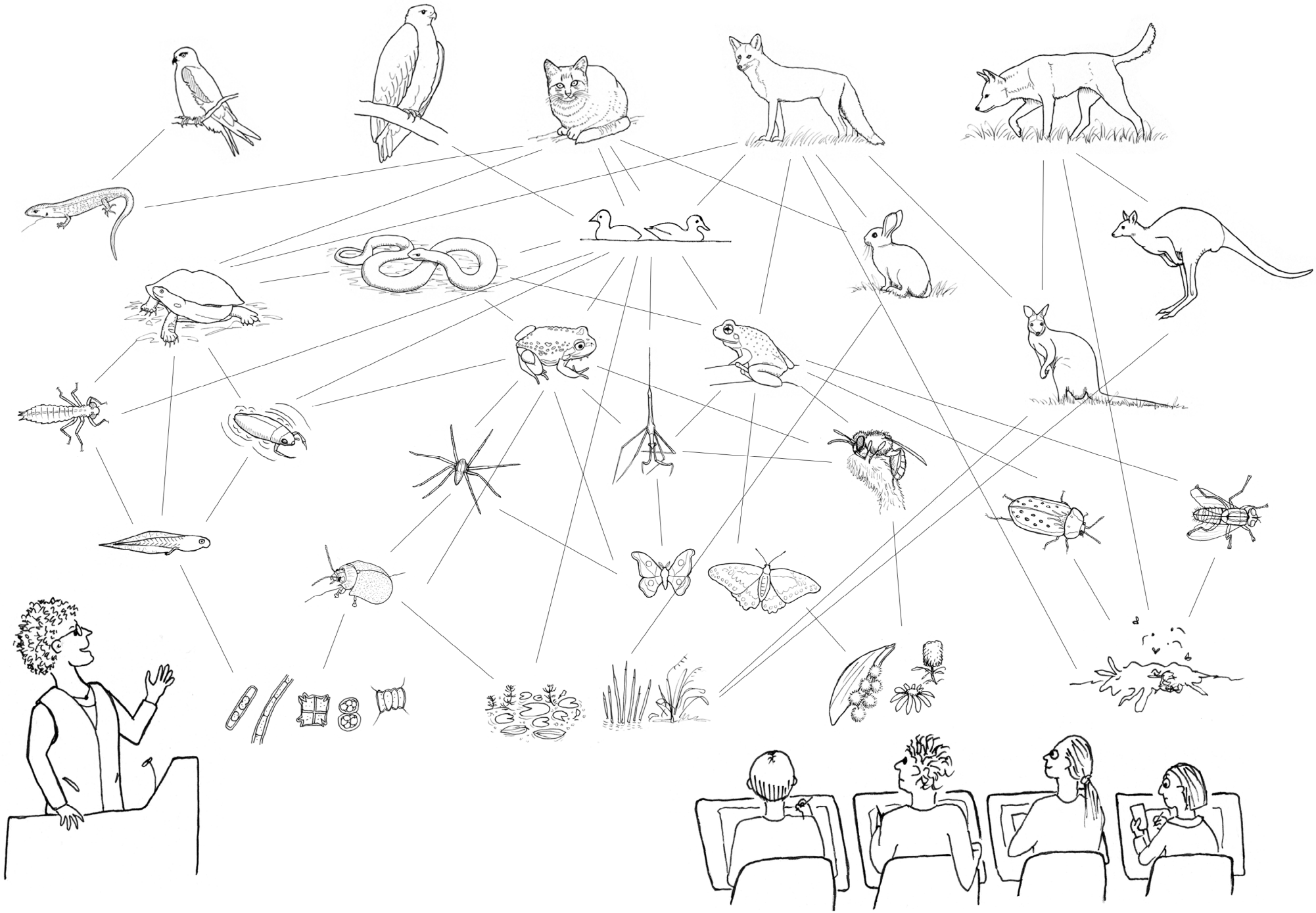
Billie grew up playing on her family's cattle farm in the Northern Tablelands. Her favourite part of the property to explore was the big wetland at the bottom of the hill.



The wetland would fill up with water during rain – there were so many interesting creatures to discover there!

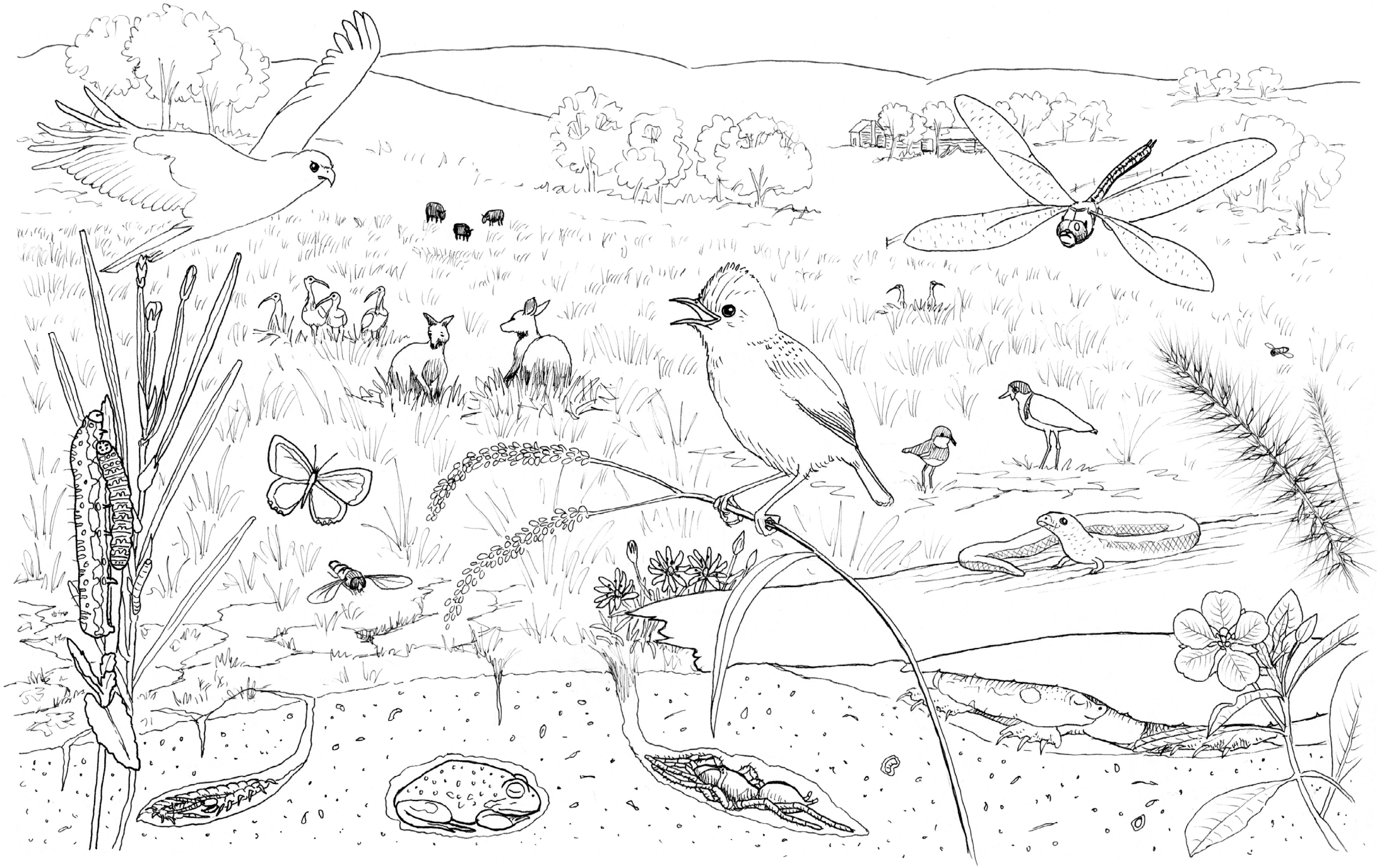


So many different birds would arrive in their hundreds to breed…and splash, and play, and sing.



When Billie finished school, she went to university to study ecology. She was so fascinated by the watery world of her wetland friends, she wanted to learn more about how they were all connected. She also wanted to help her parents. The local weather patterns had changed over the last few years, and her parents were worried about how their farm would survive.

Billie’s wetland dried out completely for several years. She felt sad at first, but soon discovered that her dry wetland was still full of life!



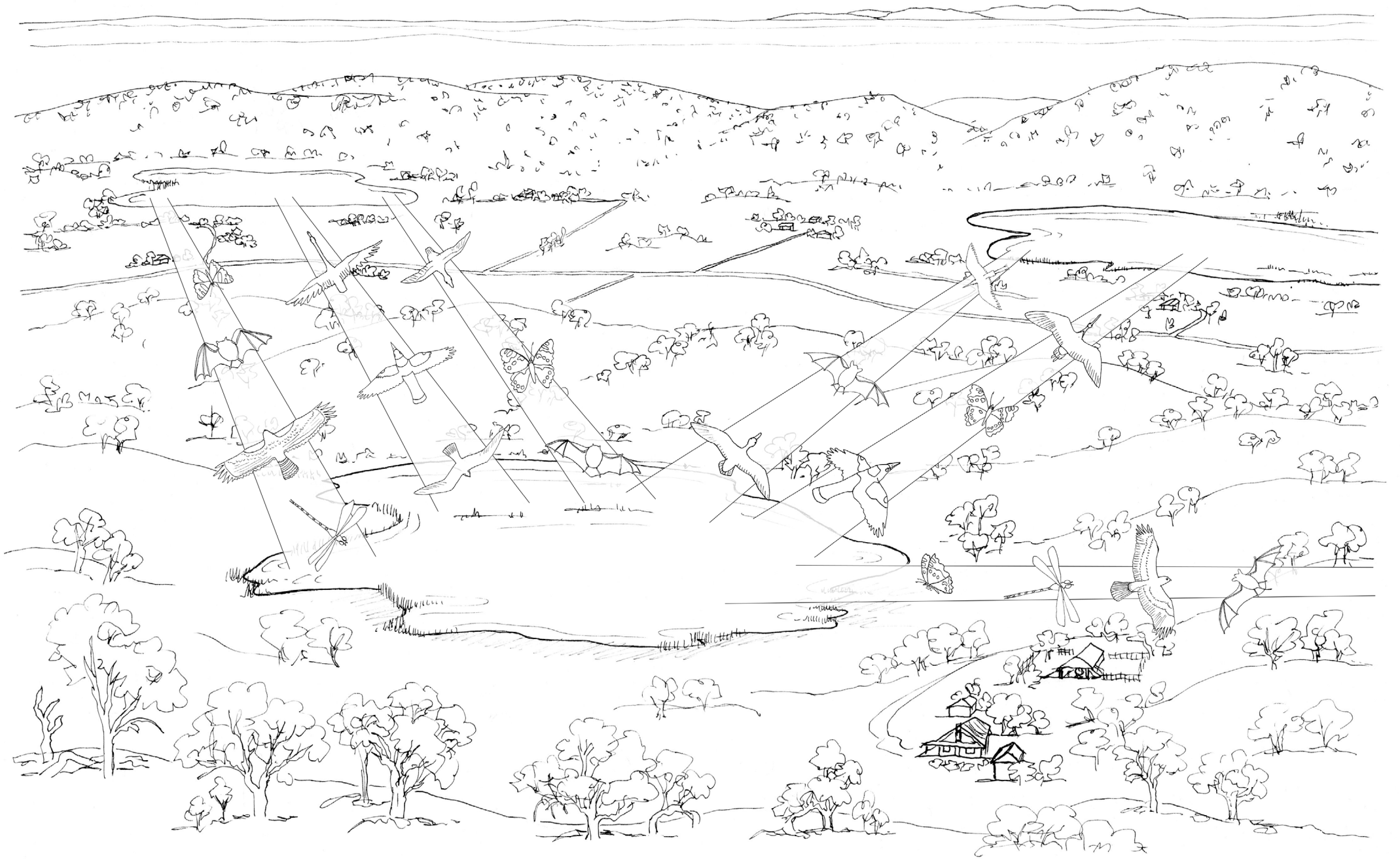
She discovered new creatures in new places, waiting for the rain to come back.

And at night she would hear the sounds of nocturnal animals coming out to feast in the lagoon.

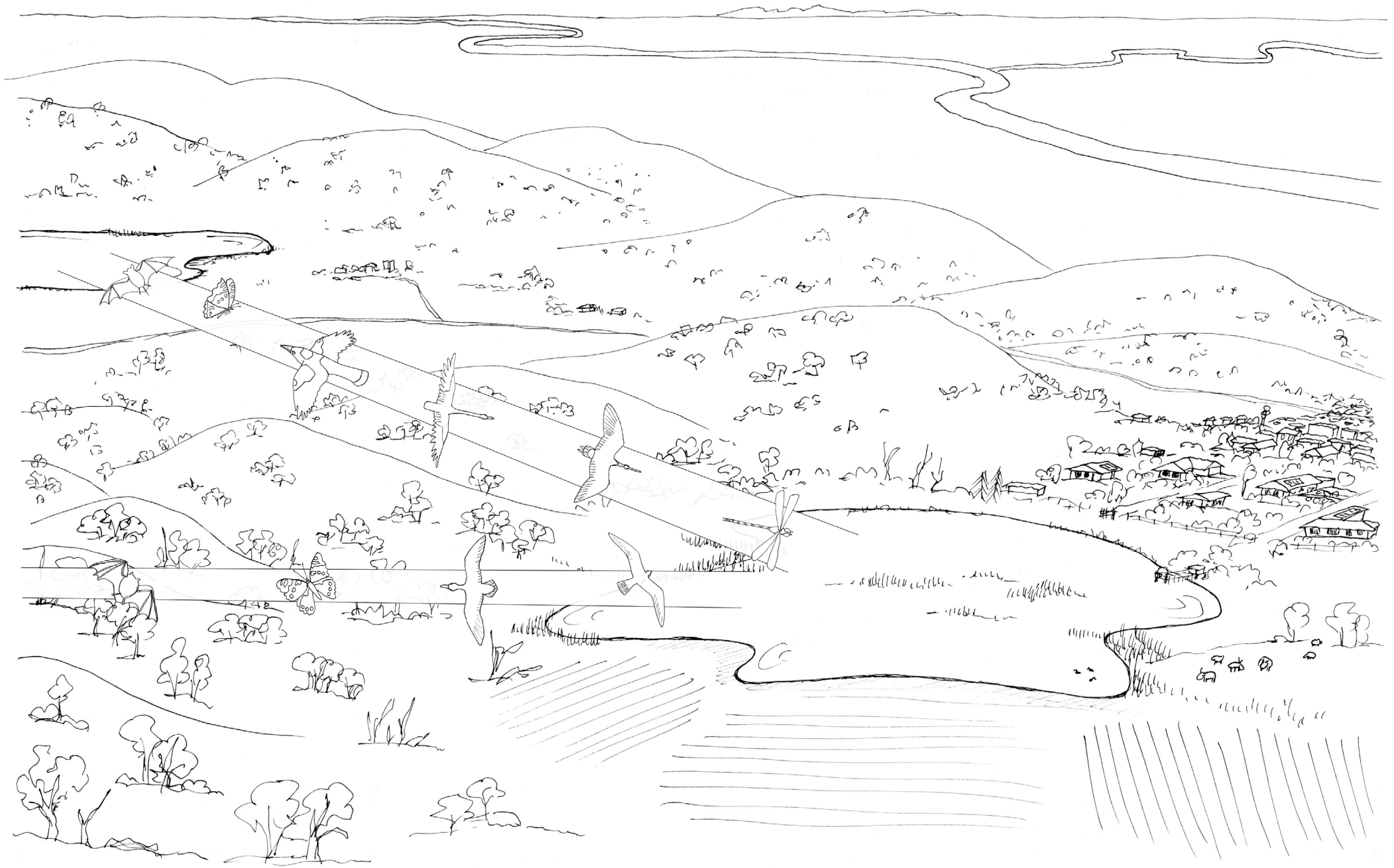
But one day Billie realised that her wetland might be in danger. She overheard her father talking about deepening the lagoon so that it could hold more water.

Billie talked to her professor at university who had been studying the wetlands for years. She discovered that making the wetland deeper would destroy the habitat for many plants and animals. They rely on the wet and dry cycles to change over time. Together the professor and Billie designed a research project to collect data about the wetland, so they had evidence to help protect it.

As part of Billie's project, she encouraged her community to help the wetland by recording plants or animals they saw at different wetlands in the Northern Tablelands on the Dynamic Lagoons citizen science website.



The community helped to identify nesting birds, breeding frogs and pollinating insects inside the lagoon. Once everyone knew how many plants and animals from around the landscape relied on the wetland, they pledged to protect it forever, for everyone to enjoy.



Tardigrades
Phylum Tardigrada
Find 1

Backswimmers
Family Notonectidae
Find on 2 pages

Water Scorpion
Laccotrephes sp.
Find 1

Water Boatmen
Family Corixidae
Find 2

Predatory Aquatic Beetle
Order Coleoptera
Find 1

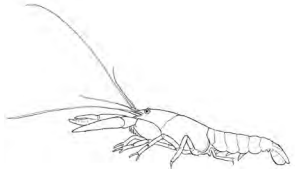
Diving Beetle
Order Coleoptera
Find 1

Hoverflies
Family Syrphidae
Find 3

Dragonfly adult
(various species)
Find 6

Orchard Butterfly
Papilio aegeus
Find 1

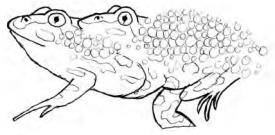
Common Grass-blue
Zizina otis
Find 3



Yabby
Cherax destructor
Find 1

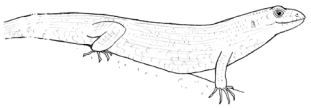
Robber Fly
Chrysopogon muelleri
Find 1

Eastern Banjo Frog
Limnodynastes dumerilii
Find 7

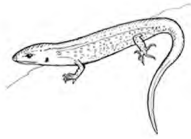


Spotted Marsh Frog
Limnodynastes tasmaniensis
Find 2

Highland Copperhead
Austrelaps ramsayi
Find 1

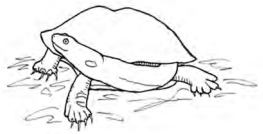


Cunningham's Skink
Egernia cunninghami
Find 1

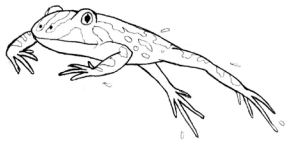


Eastern Water-Skink
Eulamprus quoyii
Find 3

Three-Toed Skink
Saiphos equalis
Find 1

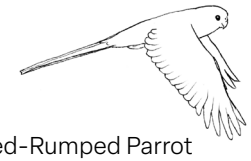


Eastern Long-Necked Turtle
Chelodina longicollis
Find 7



Striped Marsh Frog
Limnodynastes fletcheri
Find 1

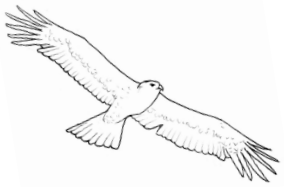
Peron's Tree Frog
Litoria peronii
Find 2



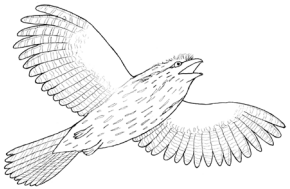
Red-Rumped Parrot
Psephotus haematonotus
Find 2

White-Bellied Sea-Eagle
Haliaeetus leucogaster
Find 1

Black-Shouldered Kite
Elanus axillaris
Find 1

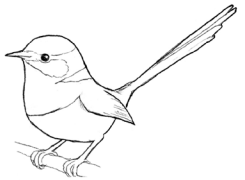


Whistling Kite
Haliastur sphenurus
Find 3



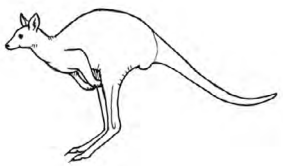
Tawny Frogmouth
Podargus strigoides
Find 1

Welcome Swallow
Hirundo neoxena
Find 2

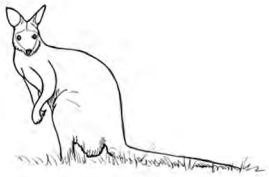


Superb Fairy-Wren
Malurus cyaneus
Find 2

Common Ringtail Possum
Pseudocheirus peregrinus
Find 2



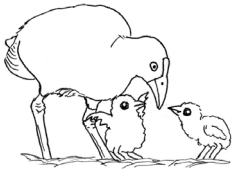
Eastern Grey Kangaroo
Macropus giganteus
Find 3



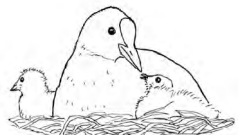
Swamp Wallaby
Wallabia bicolor
Find 2

Southern Myotis
Myotis macropus
Find 1

Comb-Crested Jacana
Irediparra gallinacea
Find 3



Purple Swamphen
Porphyrio porphyrio
Find 10



Eurasian Coot
Fulica atra
Find 3

Wavy Swamp Wallaby-Grass
Amphibromus sinuatus
Find on 1 page

Common Woodruff
Asperula conferta
Find on 1 page

Marsh Daisy
Brachyscome radicans
Find on 3 pages

Carex disticha
Find on 1 page

Cenchrus purpurascens
Find on 2 pages

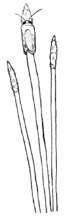
Chara sp.
Find on 1 page

Boar Thistle
Cirsium vulgare
Find on 1 page

Cynodon dactylon
Find on 1 page

Cyperus sphaeroideus
Find on 3 pages

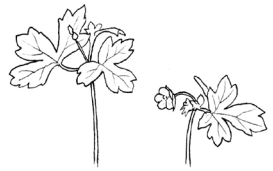
Wild Carrot
Daucus carota
Find on 1 page



Eleocharis gracilis
Find on 2 pages

New England
Peppermint
Eucalyptus nova-anglica
Find on 1 page

Benambra Snow-Gum
Eucalyptus pauciflora
Find on 1 page



Geranium solanderi
Find on 1 page

Glyceria australis
Find on 1 page

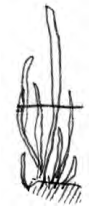
Hydrocotyle tripartita
Find on 5 pages

Isotoma fluviatilis
Find on 5 pages

Austral Rush
Juncus australis
Find on 1 page

Lachnagrostis filiformis
Find on 5 pages

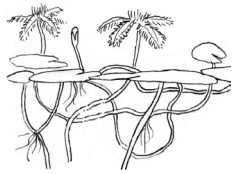
Leptorhynchos squamatus
Find on 5 pages



Lilaeopsis polyantha
Find on 1 page

Ludwigia peploides
Find on 2 pages

Myriophyllum variifolium
Find on 3 pages



Nymphoides geminata
Find on 3 pages

Paspalum distichum
Find on 1 page

Persicaria lapathifolia
Find on 2 pages

Philydrum lanuginosum
Find on 2 pages

Poa sieberiana
Find on
2 pages

Potamogeton tricarinatus
Find on 4 pages

Ranunculus inundatus
Find on 6 pages

Sorghum leiocladum
Find on 1 page

Spiranthes australis
Find on
1 page

Kangaroo Grass
Themeda triandra
Find on 3 pages

Utricularia australis
Find on
2 pages

Verbena bonariensis
Find on 1 page

Discover the dynamic world of upland wetlands, a threatened ecological community of the New South Wales Northern Tablelands. Join Billie and friends as she discovers the special ecosystem on her property and finds out how she can protect it.

An amazing variety of plants and animals call these wetlands home. Peer beneath the water to find yabbies and turtles. Find the baby birds hidden in the reeds. Colour in the wildflowers and butterflies. A key at the back of the book will help you identify them, and show you who to look for.

Where do your favourite wetland plants and animal live?