

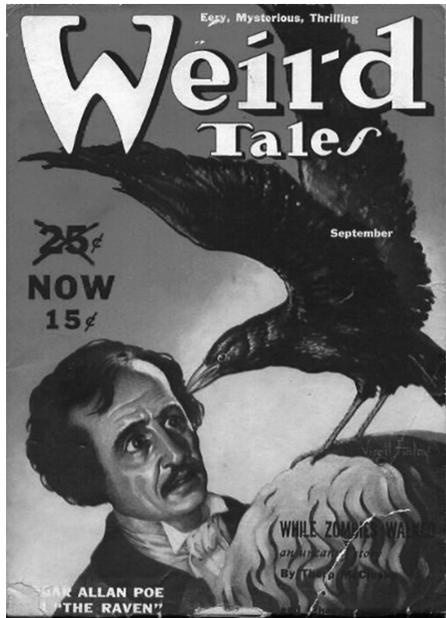


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Working to connect people and to cultivate knowledge and appreciation for the myriad plants and animals that we share our city places with.

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DESIGN Zoë Sadokierski, SpecStudio.



Virgil Finlay's cover for pulp magazine *Weird Tales* (1939) featuring Poe's 'The Raven'. PUBLIC DOMAIN

FURTHER RESOURCES: MORE ABOUT CROWS

ON BIRD FEEDING:

Jones, Darryl, *Feeding the Birds At Your Table: A Guide for Australia* (Sydney: NewSouth Publishing, 2019).

POPULAR BOOKS ON CROWS BIOLOGY:

Marzluff, John M, and Tony Angell, *In the Company of Crows and Ravens* (New Haven and London: Yale University Press, 2005).

Marzluff, John M, and Tony Angell, *Gifts of the Crow: How Perception, Emotion and Thought Allow Smart Birds to Behave Like Humans* (Free Press, 2012).

Heinrich, Bernd, *Mind of the Raven: Investigations and Adventures with Wolf-Birds* (NY: Harper Collins, 1999).

CULTURAL TEXTS:

Haupt, Lyanda Lynn, *Crow Planet: Essential Wisdom from the Urban Wilderness* (Little, Brown Spark, 2009).

Sax, Boria, *Crow* (London: Reaktion Books, 2003)

van Dooren, Thom, *The Wake of Crows: Living and Dying in Shared Worlds* (New York: Columbia University Press, 2019)

POEMS, NOVELS AND OTHER STORIES:

Boyle, Peter, 'Crows,' *Southerly* 70, no. 1 (2010).

Dreise, Gregg, *Cunning Crow* (Magabala Books, 2019).

Hughes, Ted, *Crow: from the Life and Songs of the Crow* (London: Faber and Faber, 1970).

Poe, Edgar Allan, 'The Raven'. (1845).

Porter, Max, *Grief is the Thing With Feathers: A Novel* (London: Faber and Faber, 2015).

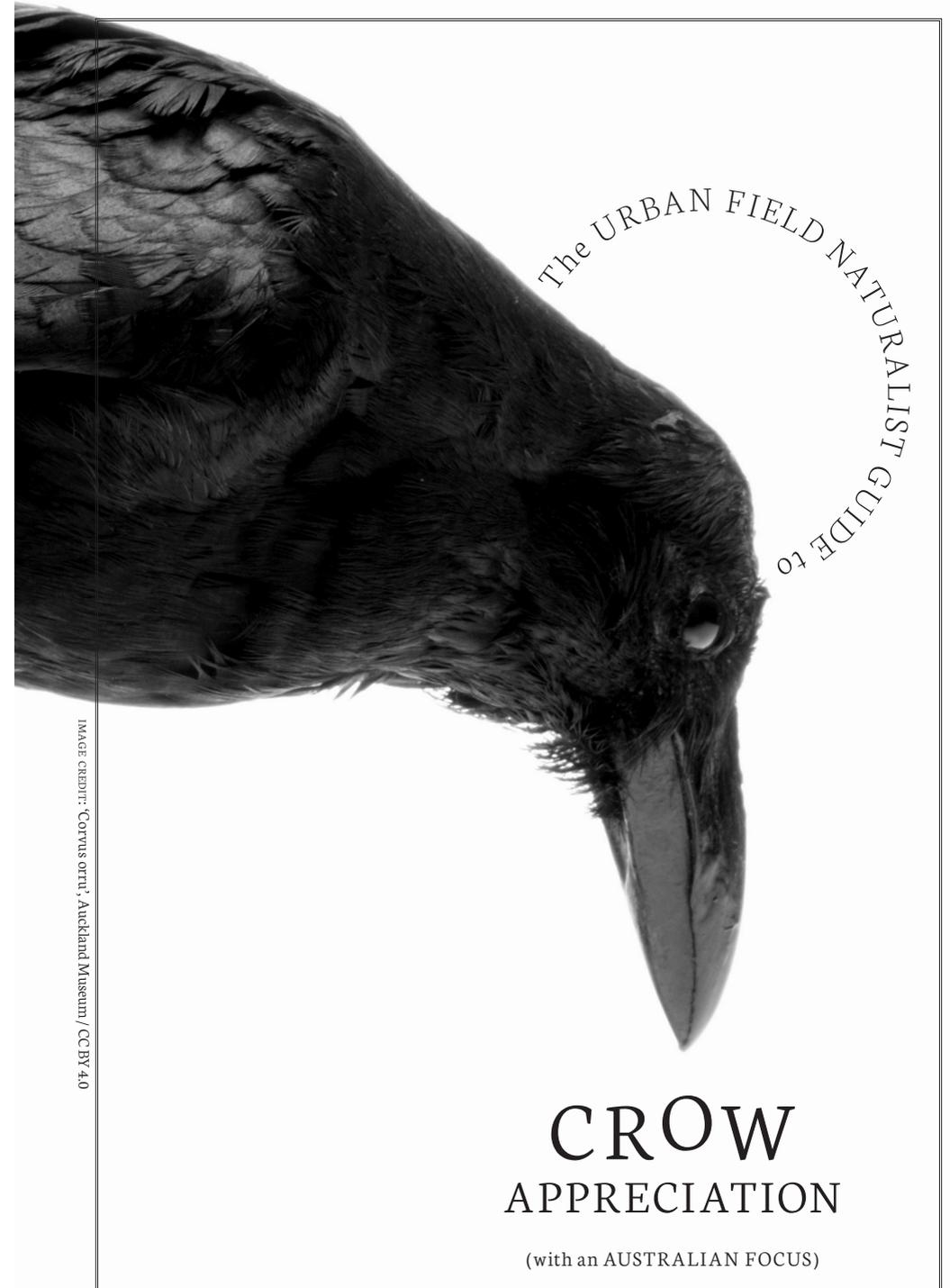
Lawrence, Nina and Bronwyn Bancroft, *Clever Crow* (Magabala Books, 2019).

RELIABLE SOURCES OF ONLINE INFO:

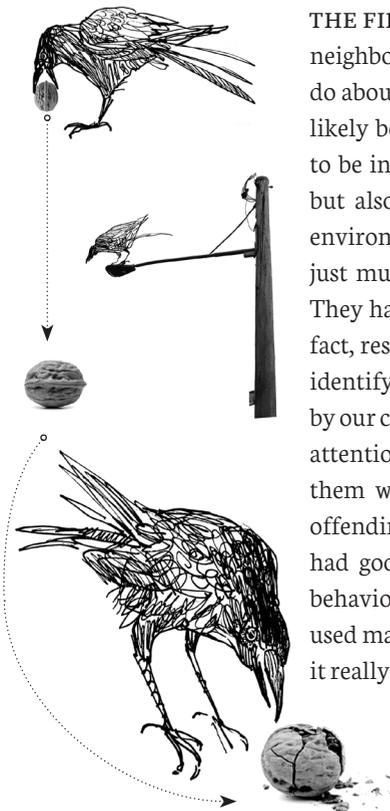
Birds in Backyards: www.birdsinbackyards.net

Atlas of Living Australia: www.ala.org.au

eBird: ebird.org



CROWS AND RAVENS are medium to large, predominantly black, birds. They're widely distributed around the world, being found on every continent except South America and Antarctica, as well as numerous islands. All of these birds are closely related to one another, belonging to the genus *Corvus*. They're all also highly intelligent and social birds. In recent decades, crows and ravens have been shown to be capable of a broad range of behaviours once thought limited to primates and a select group of other mammals, from cooperation and planning for the future, to consoling injured friends. In urban environments, you might see crows foraging for foods of all sorts, from insects to meat pies; building nests; being mobbed by groups of smaller birds worried about their presence, and more. Their crafty intelligence and their wariness make them very interesting, but somewhat challenging, for the urban field naturalist to observe.



THE FIRST THING TO KNOW about the crows and ravens in your neighbourhood is that they know a lot more about you than you do about them. And, it's probably going to stay that way. They've likely been watching you for longer, and they have more reason to be interested than you do; after all, you're a potential danger but also an important source of food and interaction in their environment. In addition, crows and ravens are also generally just much better at watching us than we are at watching them. They have fine-tuned skills of observation and identification. In fact, research in recent years has shown that crows are capable of identifying individual humans by their faces—but probably also by our cars and other distinctive features. In one study, crows paid attention to the faces of the particular humans that had trapped them with nets and continued to loudly scold and swoop the offending individuals whenever they returned to the area. They had good memories for these dangerous people too, with this behaviour lasting for over two years in some cases. Researchers used masks and changed their hats and clothing to be certain that it really was people's faces that the crows were using to make these

determinations. While the key study in this area was conducted on American crows (*Corvus brachyrhynchos*), observations around the world indicate that human facial recognition is likely a widely shared ability amongst crows and ravens.

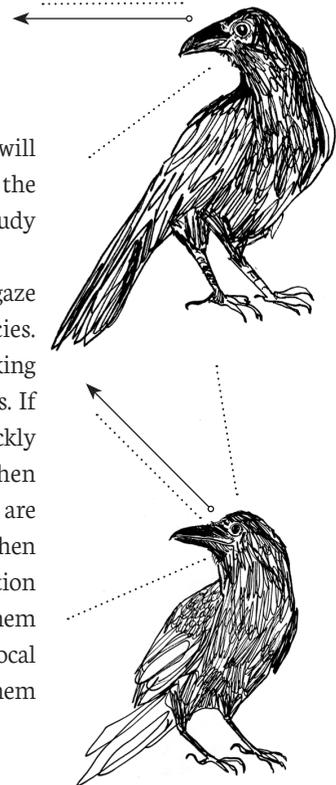
This guide focuses on the birds we commonly call crows and ravens, all of which are closely related members of the genus *Corvus* (sometimes referred to as 'corvids'). In Australia, there are generally thought to be six species of this genus: five local species and one that visits from time to time, likely arriving as a stowaway on cargo ships. We'll cover species identification towards the end of this guide. It is far from being the most interesting thing about these birds. Conveniently for urban field naturalists in Australia, it also tends to be quite simple, with one or another species dominating each of our cities.



ENCOUNTER:
Tips for crow watching

IF YOU'VE EVER TRIED your hand at crow watching, you will likely have quickly appreciated that these birds are among the more difficult creatures that you might try to make a close study of. To put it simply, they don't like being watched.

Studies have shown that crows are very good at reading 'gaze cues', from birds, humans, and likely a variety of other species. This means that they're able to determine what others are looking at—to follow our gaze and take an interest in what interests us. If it happens to be them that we're watching, crows will often quickly become uncomfortable, shifting around nervously, and then perhaps shuffling off or flying away. To put it simply, they are tuned in to where other animals are looking, and they don't it when they're the object of that attention. When we combine this situation with their ability to remember individuals who have worried them in the past, it is quite easy to create a situation in which the local crows know and avoid the would-be crow watcher who pays them too much attention.



A NOTE ON FEEDING.

Feeding isn't encouraged or necessary but if you plan to feed the wildlife in your area it is definitely worth learning more about how to do this well. In the case of corvids, the biologist Darryl Jones recommends you give them worms (alive or dead), commercial insectivore foods, or pet food (dry or wet variety), and ideally in moderation. All of these options are better than mince and cheese commonly offered to these birds, which lack important vitamins and nutrients.



Illustration from Johnny Crow's Garden, 1903. L. Leslie Brooke. PUBLIC DOMAIN



An illustration of the Fox and Crow from Kalila and Dimna, also known as the fables of Bidpai. The story is familiar in the West as one of Aesop's fables. c. 13/14th Century. PUBLIC DOMAIN

As a result, crow watching is an activity that tends to be undertaken opportunistically, in those fleeting moments in which our paths cross. If you can watch from an unseen vantage point, all the better. If not, you might have to try a kind of watching that is pieced together out of surreptitious glances: looking and then deliberately looking and even moving away to defuse the tension. You could try sideways glancing, out of the corner of your eye, but in my experience, crows tend not to fall for this.

One alternative, of course, is to ingratiate yourself to the local crows. A little bit of food now and then, can also lay a foundation of trust that will enable closer proximity. The key here is to ensure that the crows know who it was that provided the food. In this way, their ability to recognise individual can be turned to a positive.

APPRECIATION:

Some fascinating particulars

CROWS AND RAVENS ARE remarkably intelligent creatures. So much so that some biologists have taken to referring to them as 'feathered apes.' Setting aside the issues with this kind of hominid-centric framing of life and intelligence, it is clear that corvids are getting up to some pretty fascinating things that only a handful of other species are known to be capable of (although, it is quite possible that this is because we haven't taken the time to really enquire about the lives of many of these other species).

‡ In recent decades, corvids have been observed cooperating with one another to steal food from bins, pairs of bird positioning themselves around the top of the bin and working together to pull the bin liner up to reach the tasty morsels at the bottom.

‡ Crows have learnt to place tough walnuts on the road so that passing cars can open them, and then further refined the behaviour to take advantage of traffic lights and crossings to safely retrieve their contents.

‡ Ravens have demonstrated an ability to adapt their food hiding and protecting behaviours to take account of what individual birds in their social group know and don't know about where this food is.

‡ Corvids have been observed engaging in important social behaviours, like consoling individuals after a fight; there have even been numerous credible reports of corvid funerals in which birds gather around the dead, sometimes loudly cawing and on other occasions quietly observing and even leaving behind grass and other objects.

Some of these insights have been the subject of scientific studies and experiments. Others have only been witnessed by keen, or just lucky, observers. In almost all cases, however, our knowledge of these remarkable behaviours began with an encounter in which a human was paying attention and took the time to ask, 'what's happening there?' – a behaviour of an urban field naturalist.

COMMON BEHAVIOURS:

What's happening there?

IN URBAN ENVIRONMENTS, crows and ravens are most commonly encountered in their **SEARCH FOR FOOD**. These birds are by and large generalist, omnivorous, scavengers. This means that they eat everything from seeds, insects, and other birds' eggs, to roadkill. While most of their meat comes in the form of carrion—dead animals encountered opportunistically—they will also kill and consume some smaller birds, reptiles, amphibians, and mammals. In cities, these birds have honed their skills at taking advantage of human waste, from unattended picnics, or pet food, to rubbish bins. Every now and again, you'll even encounter a corvid making use of a bird bath or other standing water to soften up dog biscuits or other tough food items. Despite their highly cautious nature, when it comes to food crows and

NGIYAAMPAA STORY OF EAGLEHAWK and CROW

In Australia, one prominent Indigenous corvid story in many parts of the country centres on Eaglehawk and Crow. In the Ngiyaampaa dreaming story, Eaglehawk asks Crow to look after his baby while he is gone hunting. Crow, perhaps fed up with the baby crying, kills it and hides the body. When Eaglehawk returns, Crow is chased and hides. He eventually gets flushed out with fire, but not before he is burnt and turned black. To this day, Eaglehawk and Crow continue their animosity.

RAVEN TRICKSTER of the PACIFIC NORTHWEST

In the stories of the Indigenous peoples of the Northern Pacific Coast of North America, Raven is a powerful figure who creates and reshapes the world. According to Haida artist Christian White: "Raven was not thought of as a god. He was thought of as the transformer, the trickster. He was the being that changed things—sometimes quite by accident, sometimes on purpose." For the Koyukon of Alaska, raven is an ambivalent figure who is greatly respected and sometimes mocked; simultaneously a creator and a lazy, mischievous being who gets ahead by others' work.

CELTIC MYTHOLOGY

In Irish legends, crows and ravens are associated with war and battle. They are frequently linked to goddesses like Badb and the Morrigan, who were amongst other things deities of war.



Han Dynasty mural of a three-legged raven from China.

YATAGARASU, THREE-LEGGED RAVEN

A three-legged raven is found in the art and stories of Japan, Korea, China, and other parts of Asia, usually associated with the sun. In the Shinto tradition, this figure is called Yatagarasu, and understood to be a messenger of the gods, and an aid to those who are lost.

ODIN’S RAVENS

A pair of ravens were said to be trusted aids to the Norse god Odin: ‘Two ravens sit on his shoulders and whisper all the news which they see and hear into his ear; they are called Huginn and Muninn. He sends them out in the morning to fly around the whole world, and by breakfast they are back again.’ The names refer to the faculties of thought (huginn) and memory (muninn).

THE TOWER OF LONDON

According to legend, if the ravens residing in the Tower of London were to leave, England would fall. To ensure that this doesn’t happen, the tower has a Raven Master whose job is to ensure they are comfortable and well cared for (follow him on Twitter at @ravenmaster1). While this legend is reputed to be grounded in an ancient prophecy, more recent historical studies indicate that it may have roots in the late 19th century.

ravens tend to be among the most curious and adventurous of eaters, always willing to try out a new possibility.

Perhaps the next most common urban encounter when it comes to crows is the sight of one of these large black birds being **MOBBED** by one or more smaller birds, perhaps noisy miners or willie wagtails. In these cases, the crow or raven—either in flight or perched—will be swooped at repeatedly, usually alongside loud alarm calls from the aggressors, in an effort to drive these potential predators out of the area.

ROOSTS are another important site of potential urban interaction with crows and ravens. Around sunset every day, these birds gather together, usually in a large tree, to spend the night. These roosts vary widely in size, from just a handful of birds to several hundred. In Australian cities, Brisbane’s Torresian crows tend to offer some of the largest roosts with a few hundred birds. Beyond Australia, things vary even more widely with some corvids in Europe and North America roosting in massive groups that number in the tens or even hundreds of thousands. Alongside the safety in numbers provided by communal roosts, it has been shown that these gatherings also serve as ‘information centres’, enabling birds to take advantage of each other’s knowledge about important food resources in the environment.

If you’re lucky, you might also encounter crows and ravens **NESTING** in your neighbourhood. During the nesting season, which differs between species and locations, pairs of birds generally work together to construct a nest and feed the young. Their nests are big, messy, assortments of sticks, often lined with grass, bark, and even wool in areas where sheep provide it for them. Most of the time these nests are constructed in eucalypts or other tall trees. But not always. Australia’s corvids seem to be becoming a bit more experimental in their nesting habits. In rural areas crows and ravens have long taken advantage of windmills, telecommunication towers, and other isolated buildings to construct nests. In selected parts of our cities this has also been happening for decades, but the behaviour seems to be becoming more common. Ravens have been spotted nesting on the odd building and on

construction cranes in the Sydney CBD, as well as on communications towers in the Olympic Park area. In Brisbane, too, a growing number of breeding crows are constructing nests on buildings that are often more sheltered from weather and predators. Darryl Jones thinks that this change might signal a huge shift in the coming years as all of those birds who hatched in these kinds of nests take up the behaviour themselves. As he put it: “From now on we can expect increasing numbers of crows to be nesting on buildings all over Brisbane, and it will just spread. There’s no question about that.” Only time will tell whether other crows and ravens around the country will also start to experiment with these alternative nesting opportunities in urban environments.

Finally, the would-be crow watcher might also keep an ear open for the **SECRET LANGUAGE OF CROWS**. The common, loud, calls of the corvids are well known, the standard kar-kar-kar or ah-ah-aaaah. They announce that a bird is present or returning; they notify others of dangers; they make a claim to a territory. While these calls might be lovable in their own way, they are undeniably harsh. In contrast, however, the other language of crows is positively musical, a quiet murmuring and cooing. These calls are reserved for intimate interactions, they usually take place in or around the nest or the roost, and so many people—when they do happen upon such a noise—are surprised when they identify the source. The Australian poet Peter Boyle has captured this scene beautifully:

The sound of crows is known to us for its mournfulness, its insistent black edge to a bright world. There was a day when she stepped into a clearing and surprised crows at their other speech, the cheerful joyous rapture they know from time to time when no one is about, when they are completely free of all other creatures’ expectations. It did not last long, less than a minute before the crows perceived her startled presence. In that minute how taken home she felt to the world’s deep joy.

Collective nouns for CORVIDS.

CROWS —
Murder. ALSO: caldron, brood, mob, horde, muster, hover, parcel, storytelling.
.....
RAVENS —
Conspiracy. ALSO: unkindness, congress, aerie.
.....
CORVIDS NOT FOUND IN AUSTRALIA:
ROOKS —
Parliment. ALSO: building, clamour, company, parish.
.....
JACKDAWS —
Clattering. ALSO: train.



Ming herbal (painting): Crow. Credit: Wellcome Collection. (CC BY 4.0)

IDENTIFICATION:

A who's who of crows



Little crow
CORVUS BENNETTI

SIX SPECIES OF CROWS AND RAVENS can be found in Australia. The five endemic species (found only here) are the Little crow (*Corvus bennetti*), Torresian crow (*Corvus orru*), Forest raven (*Corvus tasmanicus*), Australian raven (*Corvus coronoides*), and the Little raven (*Corvus mellori*). In addition, the house crow (*Corvus splendens*) arrives here from time to time—and is generally promptly eradicated after being identified because of fears that these birds might become established and displace other species.

All of these species are largish birds, ranging from 48 to 56cm in size. All of them are also entirely black in colour, unlike in some other parts of the world where crows and ravens can also have readily visible patches of white and grey feathers. As a result, these species are generally pretty difficult to tell apart. Many biologists, including ones with a passion for corvids, can't readily identify species based solely on their appearance. Instead, they tend to also rely on a few other clues.

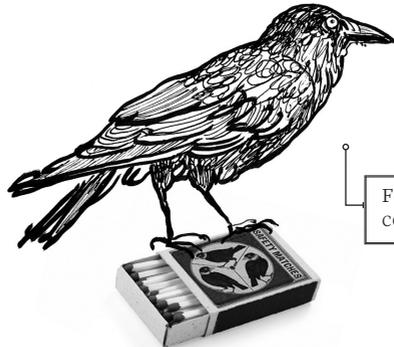
The biggest clue is **GEOGRAPHY**. If you know where you are, you can generally limit the number of species down to two or three. In fact, geography is even more important than this. For reasons that are not really understood, all of Australia's major cities tend to be dominated by a single species of corvid, even though the surrounding area might be home to others. It isn't the same species in each city, but somehow each of them has become an almost exclusive territory of one or another species. In Sydney, Canberra, and Perth, it is the Australian raven; in Brisbane and



Little raven
CORVUS MELLORI



Torresian crow
CORVUS ORRU



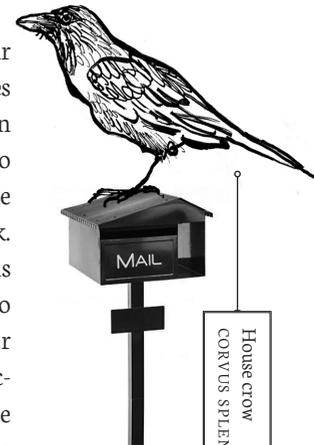
Forest raven
CORVUS TASMANICUS

Darwin it's the Torresian crow; in Melbourne and Adelaide it's the little raven, and in Hobart it's the forest raven.

In places where species do live side by side, there are a few general differences that can be helpful clues to identification. These include **SIZE**, for example Australian ravens tend to be 5 or 6cm bigger than the little ravens that they occur alongside throughout the latter's range. The **BASES OF FEATHERS** also offer a potential clue, with the two native crow species having white bases, and the three ravens grey. However, this is not a particularly helpful piece of information 99% of the time, as you generally need to be holding the bird in your hands—which is not recommended, or generally legally permitted—in order to make this determination. In addition, some species—in particular the Australian raven—have large **HACKLES**, distinctive throat feathers that stick out when they are calling.

Beyond physical appearance, differences between **CALLS**—their length, pitch, and more—can sometimes provide important clues about a bird's identity. At the same time, birds' behaviours can differ when calling. For example, the Australian raven tends to lower its head to go almost horizontal as it calls out, while the little raven stays more upright and tends to flick its wings behind its back.

Beyond the corvids, the most common identification questions that seem to be asked about crows and ravens relate to how to distinguish them from magpies and currawongs. The answer here is generally simple, both of these other species have distinctive patches of white on their bodies and wings. Sometimes the white feathers of a currawong are less obvious, in which case their big, broad, beaks and bright yellow eyes give them away.



House crow
CORVUS SPLENDENS



Australian raven
CORVUS CORONOIDES

