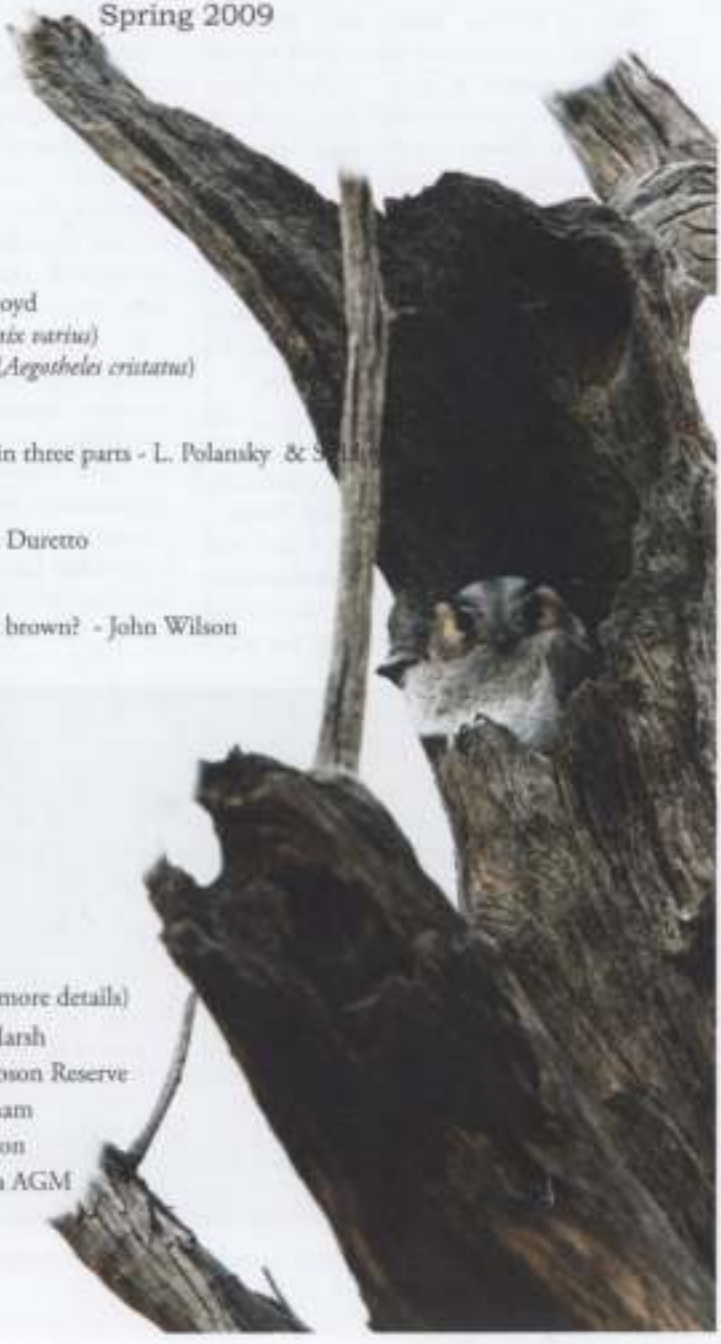
The Natural News

Central North Field Naturalists Inc. (CNFN)

No. 43 Spring 2009



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Walks Program (see insert for more details)

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January.....Birralee

Painted Button-quail (*Turnix varius*)

If you live in a place long enough and you exercise your powers of observation you're likely to become familiar with the daily routines and seasonal patterns of arrivals and departures of most of the resident and migratory birds. But the cryptic or nocturnal, though not necessarily rare, are infrequently encountered.

I first saw a Painted Button-quail at Birralee about twenty years ago when a small bird was momentarily stunned after flying into a window of our newly-built house. Because of it quail-like appearance I misidentified it as an "ordinary" quail.

A few weeks later while washing up one morning, I watched a bird walk along the track in front of the house. It pirouetted, pecked the ground, then vanished. Between the first and second sightings I had read about button-quails and their characteristic "platelets". These circular, saucer-sized scrapes - their way of exposing the seeds and insects they consume - are particularly noticeable along bush tracks after the birds have foraged in the accumulation of leaves and other litter.

In many aspects of their lives button-quails (Family Turnicidae) are extraordinary birds. Although similar in appearance to true quails (*Coturnix* spp. Family: Phasianidae) they lack a crop and a hind toe and are unrelated. Their close resemblance to quails is a case of ecological convergence whereby species with similar life styles and feeding niches evolve similar characteristics.

For many years button-quails were placed in the order Gruiformes with the families Gruidae (cranes and Brolgas), Rallidae (swamphen, native-hens, rails, crakes, coots etc) and Otididae (Bustards) but their relationships remain a matter of debate. Nowadays some taxonomists retain them in the order Gruiformes, while others place them in their own order, Turniciformes, or in the order Charadriiformes with

A Painted Button-quail at Black Sugarloaf

the families Burhinidae (stone-curlews), Haematopodidae (oystercatchers) Recurvirostridae (stilts and avocets) Charadriidae (plovers, dotterels and lapwings) and Scolopacidae (godwits, sandpipers, tattlers etc) and Laridae (terns and gulls) - among others.

An unusual feature of button-quails is their polyandrous breeding, whereby a female will mate with two or more males in one breeding season and take no part in the care of the offspring. This is an extremely rare strategy in birds, known only to occur in a few species including the Spotted Sandpiper, most jacanas and some phalaropes.

Female button-quails are larger and more colourful than the males. They have a specialised vocal organ – an inflatable bulb of the oesophagus and enlargement of the trachea - that the males lack. They emit a loud booming call in the breeding season that is apparently indistinguishable from that of a bronzewing (M. McGarvie pers com). Both parents build the nest but after laying her eggs the female leaves the incubation and rearing of young to the male. Incubation takes just 12 – 13 days and the male provides food for the downy chicks which leave the nest soon after hatching. Although the chicks are independent when they are two weeks old, they stay with the male for several weeks and are fully grown by the time they are 6 - 7 weeks old.

Despite their short breeding cycle and polyandry, which theoretically allows the females to find a new territory and another male to rear a second clutch, none of the fifteen species of button-quail that occur worldwide are common. The Small Button-quail is one of Europe's least known species, and three of the seven species of button-quail that occur in Australia are "of concern" because of their rarity.

Their secretive lifestyle and cryptic colouring means that the Painted Button-quail is rarely seen in Tasmania and its status is difficult to assess. However, given their preference for closed canopy forests with some understorey and abundant litter it is likely that, like many of our native birds, they are declining.

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Brolgas (Family Gruidae)

The taxonomic debate...

Some taxonomists place button-quails in the order Gruiformes, which includes the families Gruidae (cranes and Brolgas), Rallidae (swamphens, rails, coots, native-hens) and Otididae (Bustard). Other taxonomists place button-quails in their own order, Turniciformes.

Bustard (Family Otididae)

Tasmanian Native-hen (Rallidae)

Buff-banded Rail (Rallidae)

Sometimes they're places in the order Charadriiformes along with the Burhinidae (stone-curlews), Haematopodidae (oystercatchers), Recurvirostridae (stilts, avocets), Charadriidae (plovers, dotterels, lapwings), Scolopacidae (godwits, sandpipers, tattlers etc) & Laridae (terns, gulls) - among others.

Bush Stone-curlew (Burhinidae)

Avocet (Recurvirostridae)

Marbled Godwit (Scolopacidae)

The Australian Owlet-nightjar (*Aegotheles cristatus*)

The taxonomy of the Australian Owlet-nightjar, like that of the Painted Button-quail, is a matter of debate. Most taxonomists now agree that they are more closely related to the swifts and needletails than to the nightjars and frogmouths, which they superficially resemble. (Christidis & Boles 2008)

Australian Owlet-nightjars are small (20-24cm) birds about the size of a Yellow-throated Honeyeater. Their forward facing eyes and tiny, barely visible bill give them an uncannily mammalian appearance. They occur throughout the country and although rarely seen they are believed to be the most common nocturnal bird in Australia. Their ability to live in a range of habitats is attributed to several adaptations including the year-round use of cavity roosts, their various modes of foraging and their ability to undergo periods of torpor.

Torpor (also called hibernation) is a strategy used by many mammals to conserve energy during cold weather. When in torpor an animal's body temperature drops and all metabolic processes slow down.

Torpor is not common in birds but is known to occur in small species such as hummingbirds and swifts. Birds usually enter torpor at night when the temperature drops, or during the day when food supply is limited. The Tawny Frogmouth, at 500 grams, is the largest bird known to undergo torpor, although it may be more widespread than currently thought.

Recent research has found that owlet-nightjars can reduce their body temperature from 38-41° in the daytime to 18° during periods of torpor. They usually stay torpid for about 4 hours, but on very cold nights or when food is scarce they can remain in a torpid state for 11 hours.

Rictal bristles surround the tiny bill of the Australian Owlet-nightjar.

I have seen owlet-nightjars at Black Sugarloaf about five times in the past twenty years. Mostly I see them sitting motionless on the track when driving home at night. Several months ago I found a dead one in a room we rarely visit. While it is always sad to find a dead bird, especially one that is believed to be declining in Victoria, Western Australia and Tasmania, I took the opportunity to inspect its tiny bill and rictal bristles. These are stiff, hair-like feathers that surround the beaks of insectivorous birds. They are thought to protect the eyes of birds from flying insects and other debris. They may also help birds detect the movement of prey held in their beak.

My most recent encounter with an owlet-nightjar was during a camping trip to Birdsville and Innamincka in June 2009. Soon after arriving at the Cullyamurra waterhole on Cooper Creek late in the afternoon Ron and I heard the unmistakeable call of an owlet-nightjar, a sound reminiscent of a Brown Falcon's cackling. We are familiar with this sound having heard it at just about every place we have camped on the mainland.

Small birds, like Allen's Hummingbird (*Selasphorus sasin*) from the US, undergo periods of torpor to conserve energy when food becomes scarce.

During the night it was particularly vocal – as was another bird from an adjoining territory. On one occasion I saw it fluttering between the foliage of the trees as it chased flying insects. Owlet-nightjars also take ground dwelling arthropods so our campsite, close to a massive ants' nest, provided rich pickings. (Ants are known to be important food for owlet-nightjars but are rarely taken by other nocturnal birds.)

This owlet-nightjar did not restrict its calling to after dark but also cackled intermittently throughout the day. This could have been aggressive calling which would alert other owlet-nightjars in the area that the territory was occupied.

To my delight I eventually saw the tiny bird sitting in the entrance of its tree hollow (see picture font page). This was probably one of several cavities it had in its territory. A territory with several roosting sites has a number of advantages: it allows birds to escape from predators by quickly moving from one to another should they feel threatened; and it reduces the distance between a roost and a good foraging site, thus saving energy. Several roosting sites can reduce the chance of infestation by parasites, and different roosting sites may have different thermal properties so that at least one will be suitable depending on the time of day or year.

Despite our presence the owlet-nightjar stayed put for the four days we shared its territory. It spent most of the day sunning itself but if I got too close it would quickly retreat to the safety of its hollow.

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The Tawny Frogmouth, at 500 grams, is currently the largest bird known to undergo torpor.

Leave logs

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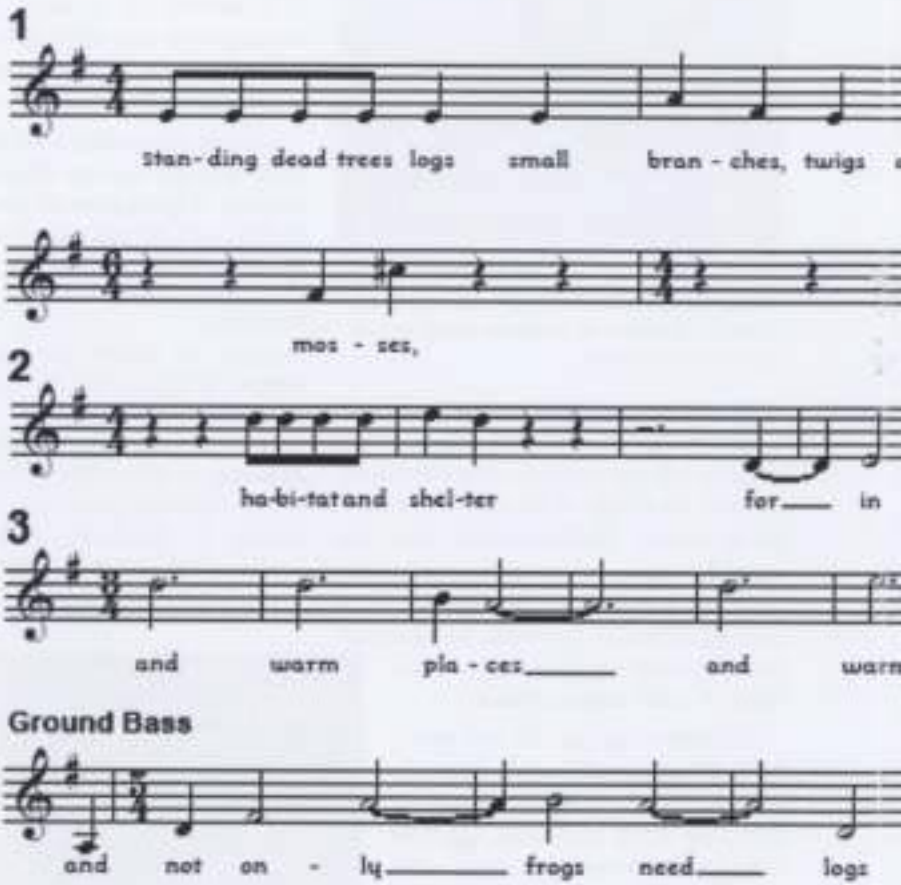


Text by Sarah Lloyd, from "Leave logs for frogs!"
Central North Field Naturalists Leaflet, 2005
Tasmania, Australia

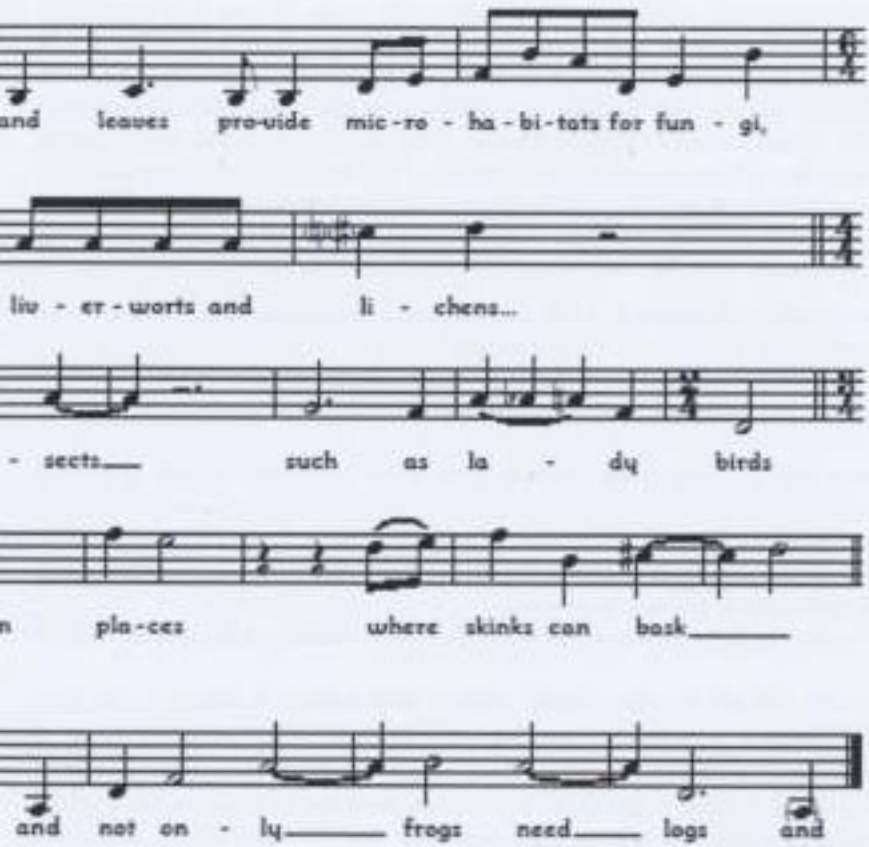
Larry Polansky is a composer, theorist, performer, professor and member of CNFN. He has been collecting and writing rounds for some years. Check: http://eamusic.dartmouth.edu/~larry/scores/other_peoples_scores/rounds/index.html

Copies of the leaflet "Leave Logs for frogs"are available from Sarah.

for frogs!

3 parts
nd bass

Polansky/Lloyd



A new resource for Tasmania: www.tmag.tas.gov.au/FloraTasmania

Marco Duretto, Tasmanian Herbarium

The *Flora of Tasmania Online* (FTO) is a publicly available web-based resource for the identification of plants and the dissemination of modern taxonomic information. FTO was launched on 9 June 2009 by Michelle O'Byrne MHA (Minister, Department Environment Parks Heritage and the Arts). It will be published in parts, each covering 1 family. FTO contains keys, descriptions, synonymy, distributional and habitat data etc for all taxa with appropriate referencing. For now, the focus of the FTO will be on the Angiosperms (Flowering Plants; 139 families), especially the Dicotyledons (100 families). The first 45 accounts (all Dicotyledons) have now been published. These include families, eg. Griseliniaceae, that have never had treatments for Tasmania (or indeed Australia!) published before. Other families have had major changes since the *Student's Flora of Tasmania* was published and the FTO accounts outline new concepts, species and genera. Families that will be published later in 2009 include Amaranthaceae (includes Chenopodiaceae), Elaeocarpaceae (includes Tremandraceae - *Tetratheca*), Ericaceae (includes Epacridaceae), Malvaceae (includes Sterculiaceae) and Myrtaceae (*Eucalyptus*).

FTO combines the scientific value of citable and permanently available documents with the speed and accessability of the internet. FTO is notable in that:

1. family accounts are provided free of charge (web pages & PDF files);
2. each account is a stand alone, citable, scientific document with unique version and ISBN;
3. all accounts will remain publicly available even when superseded by new & revised accounts;
4. public feedback is encouraged;
5. there is commitment to continuously update and improve the FTO by assimilating public feedback, new research and new discoveries;
6. for the first time the flora for the entire State of Tasmania (including Macquarie Is.) will be covered;
7. all documents will also be electronically archived (and publicly available) at the State Library of Tasmania.

To assist workers with the new classification system used in the FTO there is an interface to determine what family a genus is placed in. In addition, there are mechanisms for feedback [strongly encouraged as this will help improve and refine the FTO] and adding your name to a notification system. This last system will be used to notify users when new accounts are published and of any other changes to the website.

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Can you help?

Lisa Clarkson is collecting information from anyone who has, in recent years, seen or heard Green and Gold frogs (*Litoria raniformis*) in their area. Any information would be appreciated. Please email Lisa with details. lclrkson@bigpond.net.au

lclarkson @ live. com

Will Echidnas save the Ptunarra Brown? by John Wilson; photographs by Peter Sims

On the subject of wasps (further to Sarah's great story 'What wasp?' in the Winter issue of *The Natural News)*, there was an article in the Forest Practices Authority's newsletter *Forest Practices News* (June 2009) reporting that our sub-alpine Ptunarra brown butterfly, which is primarily being threatened by habitat loss due to forestry operations, is also being predated by feral European Wasps.

Here at Iris Farm Private Nature Reserve near Daisy Dell, we continue to see the Ptunarra brown butterflies occasionally, fluttering low to the ground, chiefly in and around the sedgelands we call 'Australis' (because from the air, they look remarkably like a map of you know what), where the Ptunarra brown butterfly's favoured vegetation, poa, grows alongside the buttongrass, pineapple grass (*Astelia alpina*) and a myriad of tiny flowering sedges bordering the woolly tea-tree swamp. There are also lots of feral European Wasps hereabouts. Although we haven't as yet witnessed them predating the butterfly or its pupae, we suspect it could be likely, given that they are extremely vicious feeders once they've identified a food source.

What we have noticed recently is that there seems to be markedly fewer European Wasps in or around Ike's Hut. It's been a pleasant change not being pestered by these irritating, invasive winged creatures while eating lunch on the verandah. So we've been wondering what might have caused our relative scarcity of feral wasps, as it can't be entirely due to us locating and poisoning a few random nests. It's been another one of life's little mysteries that has teased us over the long hot summer months, until one day recently, we came upon the remains of an underground nest (pictured), dug out and ransacked by none other than an Echidna, and we think we've found out why.

A few years ago, we were basking in the sun on a log, when a big old Echidna waddled right up to us. Fearlessly and with apparent relish, it proceeded to lick our boots, leaving trails of its long, sticky pink tongue on the leather surface (we'd recently polished our walking boots with bees' wax)! Now suppose that Echidnas do find bees' wax shoe polish utterly "irresistible". Could they have begun to acquire a taste for European Wasps' nests?

Terra Psittacorum - land of parrots by Sarah Lloyd

During a trip to the US a few years ago I met several people who had visited Australia. They commented on this country's colourful birdlife and bemoaned the fact that their birds are dull and uninteresting by comparison. (I had to disagree: hummingbirds, for starters, qualify as wonderful and colourful as far as I'm concerned, let alone woodpeckers, waxwings, mergansers and loons - to name but a few.) They were undoubtedly referring to our cockatoos and parrots; those raucous and colourful characters of the bush.

Australia was referred to as *Terra Psittacorum* (Land of Parrots) on a world map drawn by Flemish cartographer, Gerardus Mercator in 1569. And early settlers, who would have encountered at least some species just about anywhere they travelled, referred to Australia as "parrot land".

Of the 54 species of the Order Psittaciformes that occur in Australia, six are native in Tasmania: the widespread endemic Green Rosella, two breeding endemics, the Orange-bellied Parrot and Swift Parrot; the Musk Lorikeet, Sulphur-crested Cockatoo and Yellow-tailed Black-cockatoo. Three species, the Galah, Rainbow Lorikeet, and Corella are either aviary escapes or they have made their own way here.

Of the Tasmanian birds, some are flourishing in the human altered environment and are considered by some to be a nuisance; others are so specialised in their requirements that they are on the brink of extinction. This reflects a trend that is happening to birds throughout the world.

One of the most successful of the Order in Tasmania is the Sulphur-crested Cockatoo, which, contrary to popular belief, occurred here naturally. At first settlement they were absent from the drier east coast region and were patchily distributed in the remote rainforests, sedgeland plains and wet forests in the west. There were occasional flocks in the midlands including at Ouse and Epping Forest.

In March 1823 a journal entry describes a large flock seen near Lake Echo (south of the Great Lake and Arthur's Lake in the Central Highlands) confirming their residency status:

"...we again reached the verdant plain, and something appeared before us, dazzling us in the sunshine which we first took to be a sheet of water...it turned out to be an immense flock of cockatoos who...rose with a piercing screech like a great white sheet, and lighted on the branches of the trees...and hung on them like large flakes of snow. Never before had I seen so great an assembly of these beautiful birds. There must have been many thousands..."

Sulphur-crested Cockatoo

Sulphur-crested cockatoos have benefited from human activities, as the conspicuous flock at Epping Forest attests. The first time I ever passed through Epping Forest, the "forest" was piled in heaps. In the forty years since then more clearing created ideal foraging habitat for the cockies and the cattle feedlot at nearby Powranna has a ready supply of water and a year round meal of grain. No wonder they've increased! Their breeding strategy of laying three to five eggs and rearing several chicks per brood, which evolved to overcome the boom and bust cycles of continental Australia, results in a build up of birds in Tasmania's more equable climate.

Yellow-tailed Black Cockatoos are also indisputably native. Nomadic flocks of up to 100 birds roam widely in search of food. The seeds of banksias are an important component of their diet as are the seeds of introduced pines. Invertebrates are also eaten and flocks will descend on an area to rip apart old logs or tear the bark off saplings and tall trees to get at hidden invertebrates.

But the conspicuous nature of the flocks may be giving a false impression of their abundance. Black Cockatoos usually nest in remote locations and need large tree cavities in which to breed. There is great concern that as roads are pushed into more remote areas and aging hollow-bearing trees are felled during forestry operations more flocks will be displaced. The flocks we see are made up of mainly older birds with very little recruitment. Unlike the successful breeding strategy of sulphur crested cockatoos, black cockatoos lay one or two eggs, and only one chick ever survives. As usual in Tasmania there is little or no monitoring to determine if the population is stable or declining. Given the scale of industrial forestry in Tasmania, it is unlikely to be increasing.

Galahs were restricted to the centre of Australia at the time of European settlement and did not occur in Tasmania. In the hot sandy desert regions limited food limited

Galahs feed on seeds at Coongie Lakes NP in the sandy desert region of inland Australia

their population size. The expansion of white settlement meant more water and more grain. Their numbers gradually increase and they have spread far and wide. It is possible that they reached Tasmania of their own accord, but they could be aviary escapes that have established a viable population here.

Rainbow Lorikeets were first reported in Tasmania in the early 1960s, either as single birds but more frequently as pairs or flocks. Whether they were aviary escapes or self introduced is impossible to determine. What is certain is that that they, like other cockatoos and parrots, are cavity nesters and they pose a serious threat to Tasmania's resident hollow-dependent fauna.

Order Psittaciformes

For decades cockatoos and parrots were both placed in a single family (Psittacidae) in the order Psittaciformes. More recent taxonomic work, however, has identified significant differences and they are now placed in separate families: cockatoos are in the Cacatuidae family and parrots remain in the family Psittacidae.

Parrots and cockatoos have strongly-curved bills that are powerful enough to crack seeds, dig for insect larvae and bulbs, and

Long-billed Corella

Sulphur-crested Cockatoo

tear at wood. Their grasping zygodactylous feet (i.e. with two toes pointing forward and two back) are used like hands for feeding and climbing.

Cockatoos (including galahs and corellas) differ from parrots in several respects: their heads are adorned with moveable, erectile crests that are raised and lowered to indicate alarm or excitement. Some parrots have crests, but they are not moveable and are simply tufts of feathers.

Cockatoos have gall bladders; parrots don't. (Gall bladders are a reservoir for the storage and concentration of bile secreted by the liver. Many birds, including cuckoos, hummingbirds, some woodpeckers and passerines lack gall bladders.)

The powder downs of cockatoos occur in patches rather than being scattered through the plumage as in parrots. Powder downs are down feathers that grow continually rather

than being lost through the normal moulting process. The tips of powder downs break off to produce a fine, talcum powder-like substance with which the birds preen and waterproof their feathers. Powder downs only occur in some taxonomic groups such as herons and pigeons.

Cockatoos are not colourful like parrots because their feathers lack "dyck-texture" a structural element (rather than a pigment) that gives parrots their characteristic colours of blues and greens. Instead cockatoos are predominantly black or white. Some of the black cockatoos have patches of white, red or yellow; the white birds are suffused with shades of pink or pale lemon. Galahs are pink and grey.

Parrots are ancient birds. A late Cretaceous fossil (74-65 mya) of a putative parrot (some people consider it a dinosaur with a bird-like beak) is known from Wyoming in the United States and early Eocene fossils (57-52 mya) were found in Britain. Though parrots no longer occur naturally in Europe or the United States (some species are flourishing in places like Hampstead Heath, London and the arboretum in LA, with a predictable heated debate as to their ultimate fate) they have a worldwide distribution centred on the tropics.

In contrast, the earliest known fossil of a cockatoo was found in the early Miocene deposits (23 mya) at Riversleigh in north-west Queensland reinforcing Australia as the centre of cockatoo evolution. Australia is also the centre of cockatoo distribution; fourteen of the eighteen known species occur in Australia with the remainder found in nearby countries including Indonesia, the Philippines and Papua New Guinea.

Given that parrots occur throughout the southern hemisphere and there are more species in Brazil than Australia, and cockatoos are solely Australasian, perhaps Australia could have been better named *Terra cacatua*.

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Mulga Parrot

This edition of The Natural News is dedicated to the memory of
Peter L. Britton (1943 – 2009)

One of my favourite and much consulted bird books is the beautifully illustrated *The Encyclopedia of Birds: A Comprehensive Illustrated Guide by International Experts* (UNSW Press, 1991). Peter Britton was one of the experts and in the book he is described thus: formerly Honorary Associate, National Museum of Kenya and Editor: Checklist of the birds of East Africa.

I first met Peter and his wife, Hazel, at a meeting of the Birds Tasmania executive in 2001. Although they had only been in Tasmania for a short time, they were already well-versed in the conservation issues facing our birds and keen to contribute to the on-going efforts to ensure their long term survival.

I once came across them, purely by chance, at Georgetown, where they gave me some pointers on how to identify the migratory waders that visit the area each summer. Several years later we arranged to meet at Four Springs Lake where I tried to assist them in the identification, by calls, of some of our terrestrial passerines. From memory, the weather was unfavourable and the birds mostly quiet.

Peter and Hazel made regular trips to the Arm River to assist Geoff Shannon who was continuing the long-term studies initiated by Dr Bob Green. I joined them for a weekend and had my first experience of mist netting and bird banding - something Peter and Hazel had been doing since their teenage days in the UK. We discussed the possibility of a project to collect distribution data and raise awareness about Tasmania's bush birds, particularly robins. Subsequently Peter and Hazel sent me hundreds of records from their regular bird watching sites.

For the past several years Peter and Hazel have organised the northwest wader counts. This was no mean feat as it involved checking tide times, organising vehicles, liaising with landowners and dealing with reluctant - or demanding - volunteers. And their work was not over when the count was finished. Within days Peter emailed the results of the survey to each participant, with information about what birds were seen, where they were seen and by whom. As president of the Friends of Lillico Beach, Peter helped to coordinate an army of people to count Little Penguins in 2008. For several years he edited the Tasmanian Bird Report, published annually by Birds Tasmania and every month he sent countless records of sightings for inclusion in Birds Tasmania's database.

Scarlet Robin

Peter had a life-long passion for birds. For Peter, it was just as important to do all he could for the spectacularly rich avifauna of east Africa, where he spent much of his working life teaching mathematics, as it was for the birds of Tasmania.

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