



EUROBODALLA NATURAL HISTORY SOCIETY Inc.

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The Sanderling (*Calidris alba*) – Pallas 1764

Taxonomy and Distribution

The Sanderling has a cosmopolitan distribution; along with the Ruddy Turnstone (*Arenaria interpres*), it breeds on the northernmost Arctic tundra and winters as far south as Tierra del Fuego in South America. As such it can be encountered on any shoreline anywhere in the world. Despite its wide distribution, the species only has two weakly differentiated races, one that breeds across the Palaearctic and one across the Nearctic. It is placed in the genus *Calidris* and is related to numerous similarly shaped sandpipers.

Identification and Behaviour

At 18-22 centimetres Sanderlings are medium-small, typically shaped *Calidris* sandpipers and are highly gregarious, forming huge flocks with conspecifics and other small shorebirds where possible. In such aggregations in the non-breeding season they are the palest sandpipers, glowing white amongst their grey flock mates. In flight the black leading edge of the wing contrasts greatly with the rest of the pale body and the rump is black. In breeding plumage, the upperparts, throat and breast are mottled rusty yellow to rusty red and brown. In all plumages, the soft parts are jet black. Juveniles can easily be identified by their black and white spangled wing feathers. Finally, Sanderlings are the only *Calidris* sandpiper that lacks a hind toe, a diagnostic feature if seen.



Sanderling

Photo: D. Bertzeletos

Behaviour wise, Sanderlings are often described as hyperactive clockwork toys, running in and out following waves as they wash ashore. Though this behaviour is distinctive of this species, most other shorebird species can also behave in this manner. The species can also occur along calmer shorelines where its behaviour is typical of other sandpipers. The species is largely quiet away from the breeding grounds, only uttering trills and peeps when taking flight or alarmed.

Diet and Breeding

Like most other shorebirds, Sanderlings are opportunistic predators of invertebrates. In the breeding season, they feed on the teaming insects of the tundra. Whilst migrating and on their wintering grounds they will often feed on the invertebrates washed on shore by the waves. In hypersaline environments they will prey on brine shrimp and salt flies. Their beaks are rather short and stocky and consequently they can only opportunistically prey on benthic invertebrates.

In the breeding season a male will hold a territory to attract a female. Once paired, a female can lay one clutch of eggs incubated by both members of the pair, two clutches of eggs with one incubated by each

partner, or three if she decides to get an extra mate. Shorebirds lay only four eggs per clutch on average and this form of polyandry is thought to allow the species to exploit particularly productive breeding seasons.

Conservation Status and Distribution in the Eurobodalla

The species is currently listed as of least concern due its worldwide distribution. However, like all migrating shorebirds it is threatened by the destruction of habitat and disturbance. Furthermore, climate change poses a serious threat to the breeding grounds of this species and it cannot move to breed further north as it already breeds on the northernmost edges of the continents.

In the Eurobodalla the species is an annual summer migrant likely to be seen in small numbers of up to six birds at all major estuaries, though usually as singletons amongst other shorebirds. Larger numbers can be observed if conditions are favourable. Dimitris Bertzeletos

What's coming up

Saturday April 8, 2pm. Jemisons Point. Meet next to the Rural Fire Shed on Potato Point Rd, Potato Point. A walk through Spotted Gum and Bangalay sand forest. Eastern Osprey, White-bellied Sea-Eagle, Emu, Wonga Pigeon, Glossy Black-Cockatoo, various duck and water species on the lake.

Mid-week meeting to Panboola Wetland, Wednesday April 12

Meet at 8am at the Panboola Centre, Watson Waterhole next to Idlewild Motel in Bullara Street, Pambula for the Autumn survey. Wear sturdy shoes. Carry snacks and drink. The survey takes about 3 hours.

We will join the Far South Coast Birdwatchers whilst they do their bird survey at Panboola. There is a large variety of habitats on this walk. Highlights have been Southern Emu-wren (almost guaranteed), Plumed Whistling-duck, Blue-winged Parrot, Freckled Duck. Many raptors. Usually a species count of over 50.

RSVP required: as this is a meeting with another group, we need to have an idea of numbers so please let Julie Morgan (secretary@enhs.org.au) know by Monday April 10 if you plan to attend.

Sunday April 23, 9am. Deua National Park. Meet at the corner of Wamban Road and Donalds Creek Road, approximately 5kms west of Moruya. Drive to Moruya and turn west on Campbell Street, which becomes Luck Street then Araluen Road. Wamban Road is a left hand turn off this road. The national park is home to Large-billed Scrubwren, Superb Lyrebird, Pilotbird, White-cheeked and Crescent Honeyeater, Red-browed Treecreeper, Common Wombat and Dingo.

Saturday May 13, 2pm. Mogo State Forest. Meet in the car park near the toilet block, just off Tomakin Road, near the corner with the Princes Highway, Mogo. A number of bush tracks are available and we will select one based on the flowering activity of the eucalypts. If the flowering is good, we expect that Swift Parrot and a number of honeyeater species will be about.

Sunday May 28, 11am Annual General Meeting. Venue: Eurobodalla Botanic Gardens, Princes Highway Batemans Bay. Please note that the meeting will be held in the Seed Bank. Please ask at reception for directions. We will enjoy a lunch together after the meeting (there are BBQ facilities) and then a walk through the gardens. Brown Cuckoo-Dove, Australasian Grebe, Rose Robin, Crested Shrike-tit.

A nomination form is included at the end of this newsletter.

Saturday June 10, 2pm. Bogola Head. Meet at the Narooma Visitor's Centre, Princes Highway. We may need to 4WD car pool depending on the conditions of the track. The headland offers a spectacular view of Montagu Island, and good views of sea birds including White-fronted Tern, Australasian Gannet, various albatross species, prion, Southern Giant-Petrel.

Sunday June 25, 9am. Coman's Mine, Nerrigundah. Meet opposite the Bodalla Police Station, Princes Highway, Bodalla. Coman's Mine is a historic site and the wet forest and rainforest is home to Large-billed Scrubwren, Superb Lyrebird, Rose Robin, Pilotbird.

A reminder that 2017 memberships are now due

If your membership hasn't been renewed, a reminder has been included with this newsletter. Single membership \$20, family \$30 and for under 18s \$5. There are a few copies of the 30th edition of *Nature in Eurobodalla* still available for purchase and it is priced at \$13 if picked up at a field meeting or \$15.50 if posted.

A warm welcome to new members...

Jenny Davies, Bodalla.

Kevin and Megan Dawes, Surfside.

Peter Gow, Bingie.

Max Mosig and Jan Bennet, Runnyford.

Sandy Wilder, Moruya.

Looking back over Summer

We all know that fauna and flora are closely related and that without specific habitat, certain species would disappear. Even though we are aware of this reality, it takes an event like trees not flowering to remind us just how important this link is. Since I moved to Pedro Swamp in 2002, the Red (*Eucalyptus fibrosa*) and the Grey (*E. paniculata*) Ironbark have flowered each summer. This year neither species flowered and, as a consequence, there were virtually no honeyeaters or lorikeets. I would usually have hundreds of Rainbow, Musk and Little Lorikeet, and large numbers of Red Wattlebird, Noisy Friarbird, Scarlet and Yellow-faced Honeyeater feeding and breeding throughout the summer months. This year only a handful of birds were present as conditions weren't suitable. I hope they found a food source somewhere else.

Many of us visited Brou Lake over summer to see the breeding colony of Little and Fairy Terns, which was the largest breeding aggregation on the south coast, as well as the remarkable variety of shorebirds and seabirds. The species of wader we more commonly get over summer were there: Red Knot, Eastern Curlew,



Whimbrel and Eastern Curlew

Photo: K. Dawes

Bar-tailed Godwit, Red-necked Stint, Pacific Golden and Red-capped Plover. They were joined by species we see less often: Curlew Sandpiper, Sanderling and Grey Plover. Amongst the Caspian, Crested, Little and Fairy Tern were the less common Whiskered Tern (in breeding plumage), Common Tern and Gull-billed Tern.

Batemans Bay was another hot spot for the larger waders and Kevin Dawes reported Pied Oystercatcher, Whimbrel, Eastern Curlew and Bar-tailed Godwit. His excellent photo of a Whimbrel with an Eastern Curlew shows clearly the difference between the species.

Our local Emu population seems to be spreading and we had a report from Amanda Marsh of tracks on Bingie Beach, between Kelly's Lake and Grey Rocks. The species was introduced to the area by the owner of Horse Island, in Tuross Estuary, who believed they would be contained on the island. Of course Emu can swim and they have made their way to the mainland and are regularly seen from Tuross to Brou Lake and inland to Bodalla. The Bingie record marks their most northerly occurrence in the shire.

In very exciting news, we have two new locations for Southern Emu-wren in the shire. Geoff and Lynne McVeigh discovered a population on the southern shore of Candlagan Creek. The birds were using mangroves and casuarina as well as the reeds. Geoff's account of the discovery follows. Jenny Coffey photographed a male on the grassy bank of the lake at South Durras. This should make it easier to get a glimpse of this often difficult to see species. Julie Morgan

Russet Wrens

This article should show those doubting Thomases the extent of my birding knowledge. I do enjoy seeing and, especially, photographing birds and butterflies, beetles, spiders and animals.

On 22 December last year I decided to fulfil one of my ambitions in Broulee. It was to walk up Candlagan Creek through the rushes. Of course, I was warned about Red-bellied Black Snakes lurking in the rushes. I did not fear them because it is a well known fact, by me, that the snakes do not lurk in such places as they are flooded, except at low tide. Please do not tell my wife but that was the main aim of the walk – to photograph black snakes. It was a hot day. As many explorers have done in the past, I planned the trip carefully. I put on my sandshoes, no socks, sprayed my legs to avoid sandflies and mozzies, grabbed my camera and set off.

My first danger was crabs but fortunately they scurried away or down holes. Next were dragonflies. I was told that they were called that because they breathed fire. I soon realised this was not true and most likely a ploy to keep me out of the area. Another problem was an iridescent green beetle with blue legs, but there was only one. I found out later that it was the Golden Green Stag Beetle. The real worry was the spiders. They were mostly fat, juicy Golden Orb Weavers which had webs everywhere I walked. There were some Jewel spiders as well. Being the intrepid explorer, I fought my way past all of them.

I saw some butterflies and then a small brown shape fly low across the rushes. It was too big and fast for a butterfly. I thought of a mouse but, of course, they don't fly. There were a few of them. I photographed some lurking in the rushes and realised that they were birds. I ended up with five reasonable photos of the birds. The birds also flew into the Casuarina and mangrove trees. They reminded me of wrens, not just because of their size, but the way they gripped the trees and rushes. They were a russet colour. Initially they were flying quickly and very low so it was hard to get any real detail. The best views and photos were of them in the trees. They appeared cautious, but at times, would kindly sit to have their photo taken. I estimated that there were about six birds. I had never seen them before.



Male Southern Emu-Wren



Female Southern Emu-Wren

Photos: G. McVeigh

I returned home from my unsuccessful expedition and informed my long-suffering wife (Lynne) that I had discovered Russet Wrens. She was amused and continued telling me that there was no such bird. I knew she was wrong. When she saw the photos, she realised that I had discovered something, but still maintained that they were not Russet Wrens. Some people can be pigheaded. She looked through one bird book without success. The second book had a photo of the bird and Lynne told me it was a Southern Emu-wren. The first book only had male birds so it was not possible to identify the photographed bird as it was a female. I had had enough at this stage, as these birds were nothing like emus. Lynne explained that they were wrens not emus. She said the tail has six feathers and is usually held upright except when flying. The bird is so named because the tail feathers look like the feathers of an emu. I was forced to accept this.

The birds appear to be the size of a Superb Fairy-wren. The females are a brown colour with grey, brown streaked head and face and back with lovely clear feathers in the tail. The male is similar but has a beautiful light blue chest with a little blue around the eyes. The Southern Emu-wren apparently is a species which is shy and prefers to be in dense cover. These birds were like that but also flew high up in the trees.

I have taken a few other people there to see them and they have confirmed their identity. I now have many more photos of them including a group of four birds. Geoff McVeigh

New Books about Natural History

Books about the natural world continue to be huge sellers locally and internationally. There are a growing number of books about nature in all categories – including fiction, memoir and non-fiction – that are gaining mainstream attention. This is particularly true for local residents. Janice Sagar, the owner of Moruya Books, tells me that books about nature, particularly Australian books, continue to be amongst her biggest sellers. Three that stand out for her are *Back Country* by John Blay, *John Gould's Extinct and Endangered Birds of Australia* by Sue Taylor and *Hidden Life of Trees* by Peter Wohlleben.

Back Country, written by Eden resident and author John Blay, tells of his year trekking through the remote wilderness of the Wadbilliga and Deua National Parks. Travelling alone except for a pack mule, he explored this rugged section of the South East ranges, starting west of Moruya then working his way down to the mountains outside Cobargo and into Brogo before finishing at Bemboka. Originally published in 1987, *Back Country* has been extensively revised and brought up to date with additional information, including a preface, illustrations, afterword and index.

John Gould's Extinct and Endangered Birds of Australia by Sue Taylor is a beautiful book, featuring full colour lithographs of 59 birds that were common in Gould's time but are now endangered or extinct. Gould visited Australia during 1839 and 1840 with his wife, Elizabeth. He was the first naturalist to document Australian birds and Elizabeth learned the skill of lithography to illustrate his plates. Sue Taylor examines the status of each species, including information on habitat and current threats.

A book called *The Hidden Life of Trees* does not sound like an obvious bestseller but it has sold millions of copies worldwide and been translated into 19 languages. Tim Flannery, has written the Forward, in which he says that "in opening this book, you are about to enter a wonderland." According to its author, Peter Wohlleben, not only do trees and plants have feelings, they also can and do "talk" to each other. The key to it, he says, is the so-called woodwide web – trees message their distress in electrical signals via their roots and across fungi networks ("like our nerve system") to others nearby when they are under attack. By the same means, they feed stricken trees, nurture some saplings (their "most beloved child") and restrict others to keep the community strong. This may sound rather esoteric and unscientific, but Peter Wollenben is a German forester who has introduced ground-breaking changes in forestry management and underpins (most of) his ideas with hard scientific data.

Have you read a book lately that broadened your understanding of our natural world? The editorial committee would love to hear your suggestions. A short blurb about the book would be grand too. Helen Kay

Field Meeting Reports

Bingie/Coila Lake, February 2017

Despite a forecast of temperatures in the high 30s, some 15 members assembled for the first field excursion of 2017. I find it encouraging to be in a group who are prepared to venture out no matter the weather, if there is a promise of good birding and the company of likeminded people. Fortunately a cool change had arrived before we started walking, although this resulted in overcast skies and gusty winds – far from ideal conditions.

We started the walk at the sewage treatment facility where Grey and Chestnut Teal, Pacific Black and Wood Duck were loafing around in numbers. Heading through the mature coastal forest of Bangalay and Blackbutt, with a dense understorey including figs and vines, there was not a great deal of activity, although Rufous Fantail and Variegated Fairy-wren put in an appearance, in addition to their commoner congeners. The sea eagle nest seen on previous visits was still there, but the occupants were not in evidence.



Duck and Teal at the Bingie Treatment Facility
Photo: G. McVeigh

The ephemeral wetlands behind the foredune were dry despite some recent rain, but the banksia woodland held a number of the commoner honeyeaters and Glossy Black-Cockatoo were calling though not visible. On reaching the shore of Coila Lake, it became apparent that most of the birds were on the opposite side, which provided rather more shelter from the strong southerly wind. Swans, ducks, pelicans, cormorants, heron and gulls were spotted but the waders were all absent.

The walk back to the cars provided the major surprise of the day, a Black-faced Monarch foraging in the understorey. I tend to associate this species with vegetated creeklines, but this one was a long way from any creek. Back at the cars, 3 Gang-Gang Cockatoo flew over and a Leaden Flycatcher put in an appearance. The final tally was 33 bird species plus a couple of macropods – and it wasn't too hot at all. David Kay

Mystery Bay, February 2017

High grey cloud covered the sky at Mystery Bay. Eleven of us (including three new to the group) made it – more or less – by the earlier start time of 8 am, and we were under way before 8.30. Mandy Anderson was on home turf and had made time for a 'recce' the day before, so she was able to give us a good idea of what we might see. We began with a leisurely stroll around the campground, an area dominated by Spotted Gum (*Corymbia maculata*), with some Bangalay (*Eucalyptus botryoides*), White Stringybark (*Eucalyptus globoidea*), Sweet Pittosporum (*Pittosporum undulatum*) and casuarina sp. The understorey was quite sparse, not surprisingly given the area's heavy use by campers, but there were a few Burrawang (*Macrozamia communis*).



Despite the presence of many weekend campers and almost as many dogs, we saw a good variety of birds. A mixed group of Brown and Striated Thornbills moved around at eye level among the foliage, giving us an excellent opportunity to compare them. In the same area were a group of Brown-headed Honeyeater, an adult male Golden Whistler, a Satin Bowerbird, and a couple of Lewin's Honeyeater. Eastern Whipbird were heard but not seen. Then some kind campers, seeing the binocular-festooned group, pointed out a Bangalay where a pair of Tawny Frogmouth were roosting, perfectly matching the grey bark and partly hidden by the fronds of a casuarina sapling growing at the foot of the larger tree. (Photo: G. McVeigh)

From the campground we walked to a lookout over Billys Beach, where we watched waves break on the folded rocks below. (These sedimentary rocks, I read later, were buckled by tectonic activity. The hard chert has resisted weathering more than the softer slate, enhancing the lovely layered effect.) On the beach, two Sooty Oystercatcher fossicked among the seaweed at the water's edge and an immature Great Cormorant perched on a rock out in the bay. This bird, with his pale breast, had some of us wrongly identifying it as a Little Pied Cormorant until we had a closer look, thanks to Paul's camera work. Back in the camping area, a patch of thicker bush and tangled vines yielded some lovely sightings: a glimpse – too brief for some of us to catch – of a Rufous Fantail, and much more satisfactory views of a female Leaden Flycatcher and a Black-faced Monarch. We also heard but did not see Brown and White-throated Gerygone.

The layer of cloud had cleared while we were birding among the trees, and we emerged to warm sunshine and a vivid blue sky. The next stop, a short looping drive away, was Corunna Point, where we saw a large group of Variegated Fairy-wren, a Grey Shrike-thrush and a couple of Willie Wagtail. A 'kingfisher' on the beach proved to be one of those tiresome 'stick birds'. Actual birds here were few, but we did see another Great Cormorant. Lunch back at the rotunda was enlivened by our first Laughing Kookaburra sightings of the day. We finished the meeting with a brief stroll on the beach, where we discovered a couple of beach-cast shearwater. Far out to sea, we (fairly confidently) identified a couple of Australasian Gannet. Closer to land, were large numbers of Crested Tern and Silver Gull and on the rocks another Sooty Oystercatcher.

Is there a better way to spend a few hours? Spectacular scenery, beautiful weather and very good company. And our bird list for the day totalled over fifty species. Many thanks to Mandy for leading the walk, particularly in light of the other major demands on her time and energy at the moment. Gillian Macnamara

White-faced Brown Paper Wasp

I sometimes wonder what natural structures wasps used to attach their nests to before we started building houses, sheds and bridges across the Australian landscape. I rarely see their nests on trees or shrubs, or on rocks or in caves. Generally, we tolerate these additions to our homes as they are not very large or intrusive. However this is not always true of the nests of the White-faced Brown Paper Wasp.

I first noticed this species on one of those 40 degree plus summers day in Moruya. I always make sure that the water in the bird baths is topped up as the birds often come in closer to the house and shelter on the downstairs verandah. There were a number of wasps resting on the glass doors downstairs and as I walked around from room to room, I counted hundreds of these wasps. I identified them as White-faced Brown Paper Wasp, *Ropalidia plebeian*, a medium sized wasp, with a reddish brown body, a creamy-white face and thin white/cream rings around the thorax, waist and abdomen. They were not aggressive and seemed to be resting against the glass doors as they were cooler than the outside air.

Where did they all come from? I looked around and found a collection of nests under the upstairs wooden verandah on the eastern side of the house. They had built a number of combs which were attached to the verandah and the wooden beams that support it. Over the years, this has grown to cover quite a large area.

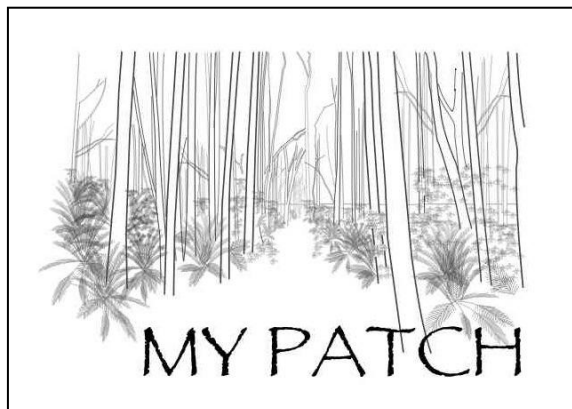


White-faced Brown Paper Wasp nests Photo: J. Morgan

The White-faced Brown Paper Wasp was researched extensively by a group of Japanese entomologists who visited Canberra. They found massive aggregations of *Ropalidia* under all the bridges that cross the creeks and rivers between Canberra and Batemans Bay, and on our coastline under cliffs and rock overhangs. These aggregations can consist of several thousand combs which hang side by side. Because they are protected from the elements, the nests can last for more than 10 years. It is not completely understood why the species aggregate like this, but protection from predators is a possible reason.

Each comb is a discrete colony with one or more egg laying females, and a number of workers. Each colony will react aggressively to its neighbours. Nests are active from early spring and through the summer. Females leave nests by late autumn and return to the same comb the next spring. The colony reproduction in this species was found to be quite unusual. When the colony gets too large, that is, when there are 10 or more females on a single comb, they form sub-groups which chew away at the comb until it is divided into two or more pieces, and these become independent nests. This comb-cutting behaviour is unique to this species of wasp and the resulting combs are irregular in shape.

If you'd like to read more on those wasps and see photos of their nests under the Nelligen Bridge, here is a link http://www.xcsconsulting.com.au/pdf/Paper_Wasps_of_Canberra.pdf Julie Morgan



ENHS members have many stories to tell about their observations of nature. 'My Patch' is a forum where these stories can be shared with others. Photos are welcome. Please send your contributions to mypatch@enhs.org.au

Logo design by Trevor King

Pigeons of Lilli Pilli

Our South Coast home is part of a tall eucalypt forest. I like to think of it as a boundless zoo and it is managed as far as possible to retain and enhance all its natural flora and fauna. Most indigenes are welcome to use its inherent features which are maintained and improved where appropriate to encourage eligible residents and visitors. Many do so from time to time and seem to like its beneficial food, water, shelter and the limited amount of human disruptive activity it provides. In return, we appreciate the pleasure our extensive observation of this unique environment provides.

A recent example is the interest taken by the family grouping of Columbidae (Pigeons, Doves). We have been visiting or living in this location intermittently for more than 17 years. In the past, while very welcome, our sightings of members of the family have been fewer and less concentrated. However in 2016/17 both species and numbers sighted have increased notably. Where we felt lucky to see a single Common Bronzewing, we might now see it grouped with several brown pigeons (or Brown Cuckoo-Dove if you prefer) and perhaps White-headed and Wonga Pigeon. Now we need to ask "why is it so?" A starting assumption might be that surrounding areas are less attractive to them, but why? We know that Crested Pigeons are seen a block or two away but not at our place where different vegetation and human activity and the mixed parrot seed feeding supplementation at our place may better suit the ground feeding pigeons which we do see. We can but continue our activity and observations until the uncertainties clear. Ian Grant

A Dollarbird display

On the morning of January 29, a group of at least 25 Dollarbirds gathered in Mystery Bay, many of them juveniles. They were perched high in the Spotted Gums, especially on the dead branches, and flying out in lovely aerial displays - not sure whether it was feeding event, or flying lessons. Possibly both. HANZAB tells me that they do congregate in large groups like this prior to their northern migration. The adults leave first - anytime between 23rd January and 24th March, then the juveniles follow up to a week later. Beautiful to watch - and something quite rare for our part of the world. They head north, not via Torres Strait, but by way of Barrier Reef islands and Solomon Islands. Mandy Anderson

Summer highlights at Comerang

Early one morning after a particularly hot night I found a microbat in the kitchen sink near the plughole. Perhaps it was attracted to the moisture. It was a Freetail bat (*Mormopterus sp.*) which, as its name suggests, has a long rat like tail that protrudes from the tail membrane.



Most years at Comerang we find a dependent young Satin Bowerbird with its mother near our house. The young are unusual in that they fledge while they still have down on their heads and appear as though they have left the nest too early.

I found a strange looking creature standing in mud beside a pool of water out in a paddock. It turned out to be a water scorpion (*Laccotrephes tristis*). Its brown body was about 3.5cm with what looked like a 3cm long tail. The tail is in fact a water siphon, used like a snorkel to bring air for breathing to an air store beneath its wings. Its forelegs are well developed to catch prey as it stands waiting for insect larvae such as mosquitoes, aquatic worms and even tadpoles and small fish. Julie Collet



A father that carries his kids around...



I enjoy night walks through the bush, and over summer, went for a couple of walks to Pedro Swamp with fellow ENHS members, Janice Sagar and Helen Ransom. On these walks, we saw what appeared to be frog spawn in Pedro Swamp but when we moved closer for a better look, the frog spawn dived to the bottom of the swamp, all together in one mass. We could not quite work out what we were looking at.... frog spawn doesn't dive like that. Luckily, Helen took a photograph (at left) which revealed more clues, showing that the mass of eggs was attached to a water bug.

I investigated further and looked up "water bug with eggs on its back" and found a family of water bugs called *Belostomatidae*. This group

contains species of fresh water bug that feed on aquatic invertebrates, fish and amphibians. They are known by a number of common names including Giant Water Bug, Giant Fishkiller and “toe-biters” because they are known to bite people wading through water. These bugs cannot breathe underwater so surface for air, which is what the bugs were doing when we first saw them.

In some species, the female lays the eggs on the wings of the male, and then he carries the eggs around until they hatch. This increases the chance of survival because of protection from predators and ensures that the eggs are constantly aerated. If it's of interest, you can see how the nymphs hatch on this video. <https://www.youtube.com/watch?v=rn-eNYvGCWU> Julie Morgan

Highlights from ENHS records - Summer 2017

Avian species	Number	Place	Observer	Comments
Emu	5, 4	PP/Brou L	MA/JM/NC	Adult with 4 young at PP. Tracks on Bingie Beach (MA/AM)
Stubble Quail	More than 20	Com	JC	A dependent young in Feb.
Brown Quail	3, calls	Bingie/Com	DHK/JC	
Pink-eared Duck	2	Broulee	HR	In Shark Bay – unusual location
Grey Teal	50	Bingie/Coila L	FM	
Peaceful Dove	Calling	Com	JC	
Bar-shouldered Dove	1 or 2	Surfside	R Soroka	
Topknot Pigeon	Up to 20, 35	MKS/PS	SMG/JM	
Tawny Frogmouth	4	Pedro/MB	JS/MA	Immatures at both locations
White-throated Nightjar	4 to 10	PS	JM	Juvenile seen with an adult bird
Aust Owlet-Nightjar	1	Com	JC	
White-throated Needletail	45, 20	MO/PS	NM/JM	Fewer elsewhere.
Wedge-tailed Shearwater	1	Off MO	NM	
Short-tailed Shearwater	30	Off MO	NM	
Australasian Gannet	2, 1	Off MB/MO	FM/NM	
Australian Pelican	5 to 25	TS	JH	Numbers fell from 25 in Jan to 5 in Feb.
White-necked Heron	2 to 3	MYA	JC/JM	Nest building in Dec. Juvenile in Feb.
Intermediate Egret	2	MYA	JC/JM	
White-faced Heron	13	Kellys L	DHK	Roosting together
Little Egret	Up to 6	Nangudga	MA	In Dec.
Eastern Reef Egret	2	MO/ Mullimburra Pt	NM/DHK	
Nankeen Night-Heron	1	BBWG	J Mather	Feb.
Eastern Osprey	1	Candlagan Ck/ Pedro Pt	MF/JM	Young bird at Pedro Pt.
Black-shouldered Kite	3	MYA	JC/JM	Adults with dependent young
Square-tailed Kite	1	MKS/PS/MO/ MB/Coolagolite	SMG/JM/ NM/MA/DO	
White-bellied Sea-Eagle	6	TS	GM	
Collared Sparrowhawk	1 or 2	PS/MO/TS	JM/NM/GM	Juvenile with adult at TS
Grey Goshawk	2	MO	DHK/NM	Female white morph with grey male
Wedge-tailed Eagle	Up to 3	PS	JM	Including a juvenile
Australian Hobby	1	Bingie Pt	DHK	
Buff-banded Rail	3, 1	TS/Com	JH/JC	One chick at TS in Dec. No rails from early Jan to mid Feb.
Aust Spotted Crake	1	BBWG	NC	Feb.
Aust Pied Oystercatcher	28	Coila L	GM	Juvenile at Brou L.

Sooty Oystercatcher	Up to 9	Broulee Is	HR	
Black-winged Stilt	3	Bevian Swamp	NC	Adult with 2 immatures.
Pacific Golden Plover	3	Brou L	DB/JM/ GLM	Mostly sheltering among the samphire.
Red-capped Plover	More than 100	Brou L	DB/JM/ GLM	Many nests and runners
Double-banded Plover	1	Brou L	NC	On Jan 26 – very early for this species.
Black-fronted Dotterel	4	MO	NM	
Hooded Plover	2	MB	MA	Nest with 3 eggs abandoned in early Dec.
Latham's Snipe	1	Com/ Coolagolite	JM/DO	
Bar-tailed Godwit	40	Brou L	DB/JM/ GLM	
Black-tailed Godwit	1	Brou L	M Griffith	On Dec 28 th . First record since 1992 at Coopers Is.
Whimbrel	2	BB	K Dawes	
Eastern Curlew	4, 1	BB/Brou L	K Dawes/	DB/JM/GLM
Ruddy Turnstone	3	Brou L	DB/JM/ GLM	
Red Knot	42	Brou L	DB/JM/ GLM	
Sanderling	Up to 6	Brou L	DB/JM/ GLM	Six on the ocean side of Brou on Jan 1 st (M Griffith).
Red-necked Stint	60 to 80	Brou L	MA/DB/JM/ GLM	
Sharp-tailed Sandpiper	10	Brou L	DB/JM/ GLM	
Curlew Sandpiper	Up to 6	Brou L	DB/JM/ GLM/NC	
Little Tern	More than 60	Brou L	MA/DB/JM/ GLM	Nesting. 2 fledglings in Dec, many runners.
Fairy Tern	4	Brou L	DB/JM/ GLM/NC	Nesting. Fledglings in Jan.
Gull-billed Tern	3	Brou L	MA/LB/AC/ GM	
Caspian Tern	4, 2	Brou L/South DS	MA/DB/JM/ GLM/J Coffey	
Whiskered Tern	1	Brou L	DB/JM/ GLM	In breeding plumage.
Common Tern	1	Brou L	M Griffith/ NC/JM	Dec-Jan.
Glossy Black Cockatoo	6, 5	Pedro/Currowan	JS/ L Gallagher	Dependent young at MO and Broulee.
Gang-Gang Cockatoo	10, 9	Deua NP/ MKS/MHS	AM/JM/ SMG	
Australian King Parrot	Up to 80	Com	JC	Numbers rising by the end of Feb.
Eastern Koel	young	Broulee/TS	GLM/JH	Being fed by a Red Wattlebird
Channel-billed Cuckoo	2	MYA	GM	Two juveniles being fed by adult Pied Currawong
Pallid Cuckoo	1	Com	JC	An immature on Feb 9 th and 10 th
Brush Cuckoo	1 to 3 or calls	Malua Bay/ MKS/PS/Pedro/ Com/Bodalla	MW/SMG/ JM/JS/JC/ MA	Immature at Bingie and MO in Jan, and in MYA in Feb.
Powerful Owl	1 to 3	Pedro	JS	Immature trilling
Azure Kingfisher	1	MKS	SMG	Unusual at this location

Sacred Kingfisher	Up to 3	Bergalia	DHK	Adults feeding a demanding juvenile in Jan.
Dollarbird	25	MB	MA	See details in My Patch. Last record Feb 5 th at Bergalia.
Red-browed Treecreeper	2	Deua NP	AM/JM	
Green Catbird	1	NA	JMG	
Southern Emu-wren	Up to 8, 1	Candlagan Ck/ Sth Durras	GLM/JM/ W Nagle/ J Coffey	Both locations are new for the species
Pilotbird	5	Deua NP	AM/JM	
White-throated Gerygone	1 to 6	Com/Com Mtn /MO	JC/NM	
Buff-rumped Thornbill	3 to 6	MB	MA	
Striated Pardalote	Calls	MYA/Com/ Belowra	JC/JM	
White-cheeked Honeyeater	10	Deua NP	AM/JM	Including young
Spotted Quail-thrush	1	Deua NP	AM/JM	
Varied Sittella	6, 2	MO/Malua Bay	NM/MW	Not usually reported from these locations
Crested Shrike-tit	1	Deua NP	AM/JM	
Cicadabird	1 or calls	Surfside/Malua Bay/MKS/PS/ Com	R Soroka/ MW/SMG/ JM/JC	
Rufous Whistler	Up to 19	MKS	SMG	
Australasian Figbird	Up to 15	MYA	JM	Including a number of juveniles
White-breasted Woodswallow	Up to 5	PS	JM	
Dusky Woodswallow	Up to 3	Belowra/Sth DS	JC/J Coffey	
Rufous Fantail	Up to 4	Surfside/MKS/ Deua NP/MO/ MB	R Soroka/ SMG/AM/ JM/NM/FM	4 in the Deua NP in Jan.
Leaden Flycatcher	2	PS/MO	JM/NM	
Restless Flycatcher	1 to 3	MYA/MO/Com/ Belowra	JC/JM/NM	Dependent young at Com in Feb.
Black-faced Monarch	3	Deua NP	AM/JM	With dependent young
Magpie-lark	5	TS	JH	2 adults with 3 young
White-winged Chough	Up to 11	Com	JC	One dependent young in Feb.
Golden-headed Cisticola	More than 10	Com	JC	Dec-Jan
Aust Reed Warbler	2	Com	JC	
Little Grassbird	2	Com	JC	Jan
Rufous Songlark	1	Com	JC	Didn't stay
Tree Martin	60	Com	JC	
Bassian Thrush	1	Lilli Pilli	IAG	Jan
Common Blackbird	1	Surfside	R Soroka	
Diamond Firetail	1	Belowra	JC	Jan
Aust Pipit	6, 2	Com/Bingie Pt/	JC/DHK	2 at MYA, MO and Brou L (NM/JM)

Non-avian species	Number	Place	Observer	Comments
Common Wombat	signs	Coolagolite	DO	Active burrows
Short-beaked Echidna	Up to 4	MB	MA	White-faced Heron seen harassing an echidna in a paddock.
Brown Antechinus	1	Mullimburra Pt	DHK	Dead
Sugar Glider	1 or calls	MKS/PS	SMG/JM	
Greater Glider	1	MKS	SMG	Jan

Common Ringtail Possum	1	MB	MA	Resident in garden.
Common Brushtail Possum	Up to 6	Com	JC	
Eastern Grey Kangaroo	Up to 44	Coolagolite	DO	
Freetail Bat	1	Com	JC	
Red Fox	1	Coolagolite	DO	
Snake-necked Turtle	5, 1	Com/Mossy Pt	JC/HR	
Yellow-bellied Water-skink	4	Com	JC	
Eastern Water-skink	3, 1	BI/Lilli Pilli	DO/IAG	
Weasel Skink	1	Surfside/Mossy Pt	R Soroka/HR	
Gippsland Water Dragon	More than 10, 1	Com/Coolagolite	JC/DO	
Jacky Lizard	3	Mossy Pt	HR	
Lace Monitor	1 or 2	Com/Lilli Pilli/Coolagolite	JC/IAG/DO	
Diamond Python	At least 6	MB	MA	Also young.
Mustard-bellied Snake	1	Coolagolite	DO	Found dead in paddock in Feb.
Bottlenose Dolphin	20, 4	South DS/TS	J Coffey/ GM	

Frogs JC/GM/JM/HR/DO	Common Eastern Froglet, Brown Striped and Spotted Grass Frog, Tyler's Toadlet; tree frogs: Brown, Eastern Sedgefrog, Jervis Bay, Keferstein's, Peron's, Tyler's, Verreaux's
Moths JC/JM/GLM/GM/J Coffey	Plume, Diamondback, Asian Corn Borer, Meal, Cream Wave, Plantain, Banded and Spotted Lichen, Black Geometrid, Coprosma Hawk, Magpie, Tiger, Hookwing Footman, Crimson Tiger, Mistletoe, Northern and Southern Old Lady Moth, Native Budworm, Heliotrope, Bogong. Larvae: White Cedar, White-stemmed Gum, Impatiens Hawk.
Butterflies MA/JC/GM/JM/DO/JS/FM	Splendid Ochre, Narrow-brand Grass-dart, Orchard and Swallowtail, Black Jezebel, Caper and Cabbage White, Dusky Knight, Brown Ringlet, Varied Sword-grass Brown, Marbled Xenica, Wonder, Common, Tailed Emperor, Meadow Argus, Aust Painted Lady, Yellow Admiral, Monarch, Common Grass Blue
Dragon & Damselflies JC/JM	Common Bluetail, Red and Blue Damsel, Black-faced, Wandering and Scarlet Percher, Blue Skimmer, Common Glider, Tau and Australian Emerald, Orange Thread-tail, Gold-fronted River Damsel
Beetles JC/JM	Cowboy, Pintail, Net-winged, Plague Soldier, Repsimus, Christmas, Click, Dung, Small Blue, Aerarium and Acacia Leaf, Argentinian and Green Scarab, Banded Pumpkin, Metallic Green Acacia, Three-lined Potato, Honeybrown; Ladybirds: Transverse, Twenty-six and Common Spotted, Spotted Amber, Tortoise-shelled, Striped, Fungus-eating, Mealybug.
Bugs JC/JM	Water Strider, Water Boatman, Bronze Orange, Spined Predatory Shield, Harlequin, Pale Cotton Stainer. Cicadas: Double-spotted, Black Prince, Razor Grinder.
Other insects JC/JM	Blue Banded and Masked Bee. Yellow-winged Locust. Wasps: Common Paper, White-faced Brown Paper, Blue Flower, Spider, Orange Caterpillar Parasite. Black Field Cricket.
Spiders JC/GM/JM/NC	Spiny, Two-spined, Swift, Wheel-weaving Garden, Black House, St Andrew's Cross, Leaf-curling, Jumping, Little Striped Wolf, Huntsman, Net Casting, Water, Daddy Long Legs.

RAINFALL (mm). December: 20 at Lilli Pilli, 65.5 at MKS, 50.4 at TS, 75 at Com, 55 at MB, 64.75 at Coolagolite. **January:** 2 at Lilli Pilli, 12.5 at MKS, 9 at Bergalia, 14.5 at Com, 30 at MB, 13.75 at Coolagolite. **February:** 36 at Lilli Pilli, 58 at MKS, 37 at Com, 56.5 at Coolagolite.

Contributors

MA	M Anderson, MB	JH	J&J Houghton, TS	JS	J Sagar, Pedro
DB	D Bertzeletos, Surfside	DHK	D&H Kay, Bergalia	MW	M Wilkinson, Malua Bay
LB	L Burden, MYA	GLM	G&L McVeigh, Broulee	FM	Field Meeting
AC	A Christiansen, MB	GM	G Macnamara, TS		K. Dawes, Surfside
NC	N Clark, Surf Beach	AM	A Marsh, Bingie		J. Coffey, South DS
JC	J&P Collett, Com	NM	N Montgomery, MO		R. Soroka, Surfside
MF	M Fyfe, Broulee	JM	J Morgan, PS		L. Gallagher
IAG	I&A Grant, Lilli Pilli	DO	D Ondinea, Coolagolite		M. Griffith
SMG	S&M Guppy, MKS	HR	H Ransom, Mossy Pt		J. Mather

Places					
BB	Batemans Bay	ERBG	Eurobodalla Botanic Gardens	NP	National Park
BBWG	Batemans Bay Water Gardens	MKS	Maulbrooks Rd S, MYA	PS	Pedro Swamp
BI	Bermagui	MO	Meringo	PP	Potato Point
BP	Burrewarra Point	MYA	Moruya	SB	Surf Beach
Com	Comerang	MH	Moruya Heads, N&S	SF	State Forest
CO	Congo	MB	Mystery Bay	TS	Tuross
DS	Durras	NA	Narooma	WL	Wallaga Lake

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Eurobodalla Natural History Society: Annual General Meeting 28th May 2017

Nomination form for election of Office Bearers and the Committee

Chair..... Nominated by.....

Consent of Candidate..... Seconded by.....

Secretary..... Nominated by.....

Consent of Candidate..... Seconded by.....

Treasurer..... Nominated by.....

Consent of Candidate..... Seconded by.....

Recorder..... Nominated by.....

Consent of Candidate..... Seconded by.....

Committee member..... Nominated by.....

Consent of Candidate..... Seconded by.....

Committee member..... Nominated by.....

Consent of Candidate..... Seconded by.....

Please return to the Secretary, ENHS, P.O. Box 888 Moruya, NSW, 2537 by 19th May 2017.