

# TEAM OYSTERCATCHER NEWSLETTER, No. 1. August, 2018.

WHAT'S BEEN HAPPENING IN 2017/18, AND FUTURE DIRECTIONS.

## Items of Interest

1. **Monitoring on the SE Fleurieu Coast**
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3. **Sightings of banded/flagged Pied Oystercatchers**
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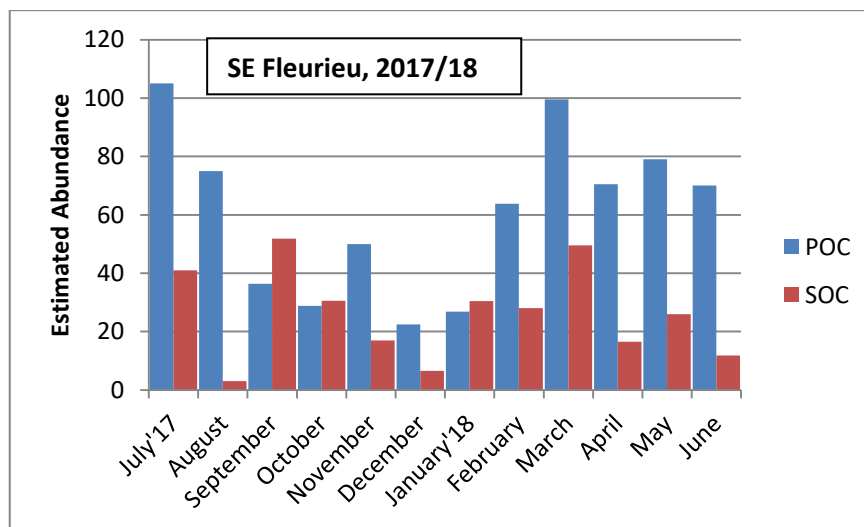
**Sooty Oystercatcher, Southend, SE SA, May, 2018. Photo: Jenny Hiscock**



**Part of a roosting flock of Pied Oystercatchers, Murray Estuary. March, 2018. Photo: Keith Jones**

## 1. Monitoring on the SE Fleurieu Coast.

2017/18 was the 7<sup>th</sup> consecutive year of monitoring numbers of Oystercatchers at the 10 sites between Middleton and the Murray Mouth. Peaks in abundance of both species occurred in autumn and winter with lowest numbers in Summer. This has now been consistent for Sooty Oystercatchers (SOCs) for every year; and similarly for Pied Oystercatchers (POCs), except for the first two years (2011/12 & 2012/13), when abundances were highest in spring months. Interestingly, the spring peaks in those first two years were observed on the ocean beaches (Middleton and Goolwa), whereas in the later years, the autumn/winter peaks were evident inside the Murray Mouth. Overall, abundances of both species were lower in 2017/18 (>100 for POCs and 50 for SOC), compared with the highest year in 2016/17 (> 200 for POCs and 95 for SOC), however, they remained higher than in the 2012/13 and 2013/14 years. One interesting observation has been that in months when POC abundances were relatively high on the ocean beaches, they were significantly lower inside the mouth and vice versa, inferring some movement of birds between the two habitats. Sightings of flagged birds in the two areas confirm this inference (see # 3).

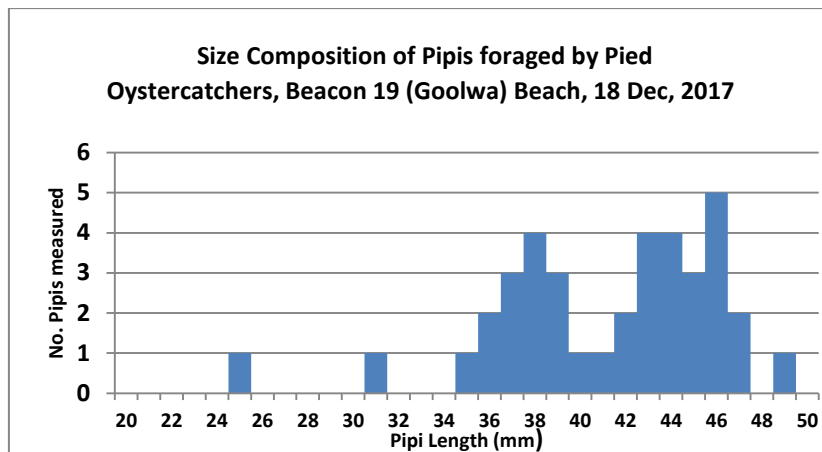


Potential threats by people, dogs, off-road vehicles (ORVs), and natural and feral predators continued to be monitored. Unsurprisingly, peaks in numbers of people, including dog walkers and Goolwa Pipi gatherers, occurred mainly in the summer months and on the Easter public holidays. When correlated to bird abundances (both species), most showed negative correlations, thus inferring that when bird numbers were low at a site, human activity was relatively high and vice versa. However, no correlations were statistically significant. Additional data on air temperature may assist in further exploring this relationship, and these data began to be collected in 2017/18. The eastern Goolwa Beach remains the “hotspot” for ORVs, and correlations between ORV numbers and bird abundances are yet to be analysed.

## 2. Feeding Ecology of Oystercatchers.

On the Fleurieu ocean beaches, Goolwa Pipsis comprise a good part of the diets for both species, whereas, within the Murray estuary, annelid worms appear to be their preferred diets. During one of the surveys along the ocean beaches in December, 2017, the feeding holes where POCs had been probing for Pipsis were discovered at Beacon 19 Beach, and the discarded shells immediately adjacent to these holes were measured (see graph below). A comparison between the size

compositions of discarded shell and the sizes of Pipsis gathered during a fishery independent survey were very similar (N. Whiterod & S. Zukowski, Aquasave, pers.com.).



In 2017/18, a small SA Recreational Fishery research grant was awarded to a Goolwa-based research team (“Aquasave”) to carry out fishery independent pilot surveys of the Pipi population at Goolwa and Middleton Beaches. This project has monitored Pipi seasonal size compositions and relative abundances, as well as their movements through a tagging program. These data are currently being analysed, and with our data on Oystercatcher spatial and temporal distributions, the hypothesis that Oystercatcher abundance on ocean beaches are a fishery-independent indicator of peak Pipi biomass will be tested.

On 10 February, 2018, immediately following warm, calm weather and a dodge tide, we observed a mass stranding ( many thousands) of the *Mactra* surf clam (*Mactra australis*) at the western most monitoring site on Middleton Beach (see photo below). This species of clam is normally found on surf beaches in waters slightly deeper than those for Pipsis. When cast up on the beach, many of the clams had their shells open, with flesh exposed, and with up to 20 SOC's as well as 200 Silver Gulls gorging on the opened bivalves. The sizes (max. shell length) and flesh weight of a sample of 30 clams were measured (average length: 46.5 mm, average flesh wgt 4.3 gm), and these data will be useful in the future when the foraging dynamics of Oystercatchers is researched. Co-incidentally, a large die-off of Goolwa Pipsis occurred along the Middleton and western Goolwa beaches in November, 2011 under similar environmental conditions. During this event, both SOC's and POC's gorged on these Pipsis. Both these examples suggest both species opportunistically forage at areas of relatively high food biomass.



**Part of the mass stranding of *Mactra* surf clam (*Mactra australis*) at Middleton Beach, February 10, 2018.  
Photo: Keith Jones**

### 3. Sightings of banded/flagged Oystercatchers.

During 2017/18, six sightings, made up of at least four separate banded /flagged POCs were made, bringing to a total of 10 separate marked birds sighted on the SE Fleurieu coast since 2011/12 (see table below).



**Flagged Pied Oystercatcher (S1) at Beacon 19 Beach, SE Fleurieu, Nov, 2016. Photo: Keith Jones**

Type of Band/Flag	Location and Date of Banding/flagging site.	Location and Date of Re-Sighting
Green/White/Black band	Victoria (Corner Inlet or Pt. Phillip Bay), < 2007	1. Inside Murray Mouth; 2 Dec, 2012
		2. Inside Murray Mouth; 29 March, 2018
Black Band	Victoria (Corner Inlet or Pt. Phillip Bay), < 2007	1. Inside Murray Mouth; 2 Feb, 2013
		2. Inside Murray Mouth; 30 Aug, 2013
Yellow Flag with black lettering, code unidentifiable	Corner Inlet, Victoria, > 2003	Reeve's Point, Kangaroo Island; 22 July, 2015
Yellow Flag with black lettering, code unidentifiable	Corner Inlet, Victoria, > 2003	Reeve's Point, Kangaroo Island; 22 July, 2015
Black Flag, with white lettering (C8)	Danger Point, SE SA; March, 2012	1. Barrage Beach, SE Fleurieu; 9 Dec, 2015
		2. Middleton Beach; 9 Oct, 2016
		3. Barrage Beach; 30 Oct, 2016
		4. Beacon 19 Beach; 10 Jan, 2018
		5. Inside Murray Mouth; 29 March, 2018
		6. Inside Murray Mouth; 1 Aug, 2018
Black Flag, with white lettering, code unidentifiable	SA by M. Christie, unknown date.	Barrage Beach, SE Fleurieu; 21 Aug, 2014
Black Flag, with white lettering, C4	Danger Point, SE SA, 2012	Middleton Beach; 9 Oct, 2016
Black Flag with white lettering, S1	Thompson's Beach, GSV, 2014, as a 2 yr old bird	1. Middleton Beach; 9 Oct, 2016
		2. Beacon 19 Beach; 19 November, 2016
Black Flag, with white lettering, R 7	Danger Point, SE SA, 26 March, 2016 as a 4+ yr old bird	Inside Murray Mouth, 10 June, 2017
Yellow Flag, black lettering, code unidentifiable	Corner Inlet, Victoria; > 2003	Inside Murray Mouth; 29 March, 2018
Orange Flag, Code unidentifiable	Corner Inlet, Victoria; > 2003	Inside Murray Mouth; 24 & 29 March, 2018

Additionally, in this last year, a metal banded POC was sighted near Rocky Point, Kangaroo Island, and this has been sighted a number of times since 2013 by D. Potter and J. Turner. The location and

date of banding is unknown, possibly by T. Dennis on KI in the 1990's. Originally, a metal banded bird, presumably the same bird was photographed at Rocky Point in 2008 before the surveys began (D. Potter, pers.com.).

A summary of all sightings are:

- A number of multiple sightings of individual birds have been made, most importantly, C8, which has been sighted at least 6 times on the Fleurieu coast (either on the Ocean Beach or inside the mouth of the Murray). This bird has moved between the Ocean Beaches and the Murray Mouth and has now reached more than 6 years of age.
- Maximum duration between dates of banding and last sightings in our regions has been at least 15 years. Note, 2003 was the first year of using flags at Corner Inlet, and, as the exact identity of the bird is unknown, the year of flagging is uncertain. This relates to the bird sighted at the Murray Estuary in March, 2018 (see table). Similarly, bands were not used after 2007 at Corner Inlet or Pt. Phillip Bay, and so this year is used to set the date of banding for banded birds re- sighted in SA. The longest duration for the green/white banded bird is at least 11 years (banded before 2007 in Victoria and sighted at the Murray Estuary in March, 2018 (see table).
- The maximum straight line distance between the locations of flagging and sighting has been 860 km (Corner Inlet, Victoria to Reeves Point, Kangaroo Island).

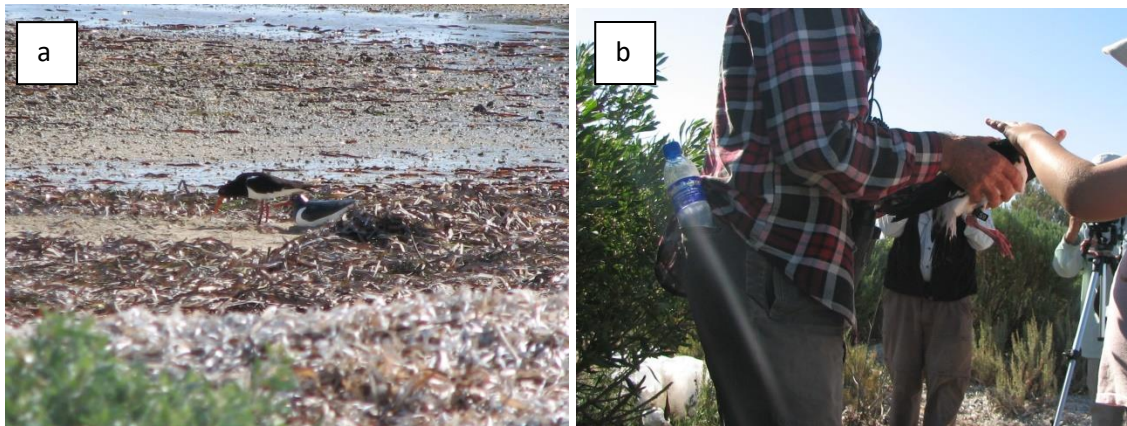
On the Fleurieu since June 2011, we've had a total of 17 banded/flagged POC sightings, comprising up to a maximum of 10 birds. The dates of first sightings of these birds on the Fleurieu, suggests slightly higher numbers of flagged birds sighted in the last two years. This may reflect the higher overall abundances of birds on the Fleurieu in 2016/17 and 2017/18, although it could also reflect the recent increase in the number of birds that have been flagged in the SE of SA and the Samphire Coast.

- Zero banded birds were sighted in 2011/12;
- 2 banded birds sighted in 2012/13;
- Zero banded birds sighted in 2013/14;
- 1 flagged bird sighted in 2014/15;
- 1 flagged bird sighted in 2015/16;
- 3 flagged birds sighted in 2016/17;
- 2 flagged birds sighted in 2017/18;
- 1 flagged bird sighted in 2018/19 (so far).

As part of a shorebird banding project on the Samphire Coast by the Friends of Shorebirds SE group, headed by Maureen Christie, a POC was captured by mesh loop net and a decoy at Port Wakefield in November, 2017 and was subsequently flagged, banded and released in good condition (see pictures below). To identify this bird in future sightings, observers should note that the flag is black, with white lettering (S9), and is placed on its upper left leg. We await with interest, future sightings of this bird. The merits or otherwise of banding/ flagging of birds arise as a regular issue for discussion. The banding of birds provides a cost effective research method for collecting information on their population dynamics, and therefore, is a valuable tool in providing management advice. All banding



is carried out by trained bird handlers who are licenced. All banding projects must be undertaken under strict scientific permits.



**Capturing a Pied Oystercatcher at Port Wakefield, Samphire Coast in November, 2017 (a), using a decoy and mesh loop net, and (b) releasing the flagged bird (S9). Photos: Keith Jones**

There have been no known sightings of flagged/banded Sooty Oystercatchers in our regions.

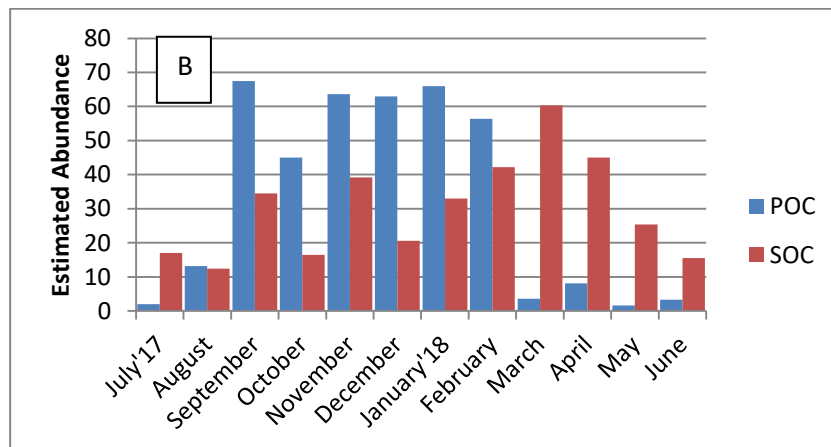
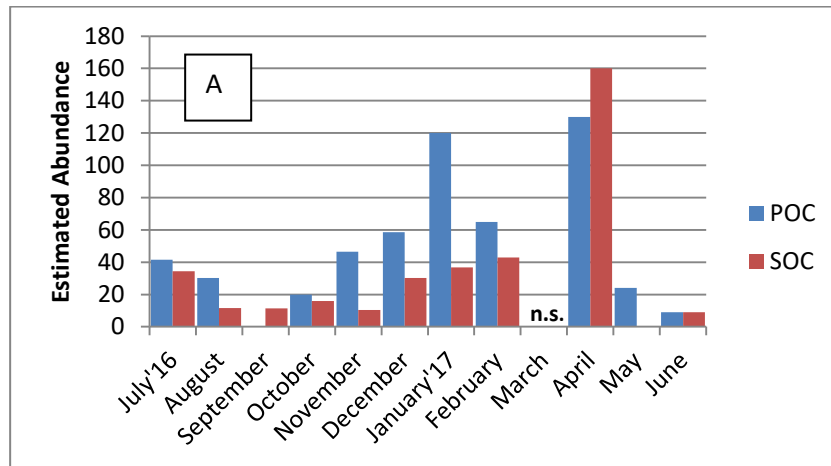
#### **4. Monitoring the Samphire Coast**

Most of our Samphire Coast monitoring in 2017/18 took place within the Port River and at Semaphore South, with only an occasional foray further north to St. Kilda, Port Prime and Thompson's Beach. With the permanent migration of two of our Samphire coast volunteers (Dave and Jean) to Kangaroo Island we welcome Kirsty and Sarah to the Port River monitoring team. We've seen major differences in the seasonal abundances of both OYC species between the last two years (see below). In 2016/17, lowest abundances of POCs occurred in September, and numbers peaked in January and April; whereas in 2017/18, abundances remained steady from September to February, 2018, and then declined for the rest of 2017/18. A survey at Port Prime in the northern areas of the Samphire Coast in April, 2018 did find more than 20 foraging POC's, suggesting that the birds from the Port River had moved north. Summer counts of all species of shorebirds to the north of the Port River (Section Bank to Bald Hill) have been undertaken for a numbers of years by Birdlife Australia volunteers (Purnell, 2018). Although their results have yet to be reported for the 2017/18 season, the POC counts on the northern Samphire coast for January and February, 2017 were of similar magnitude (93 & 89 resp.), to those for the same months in 2017 in the Port River (see graph A below). These data suggest that the Port River flock is only one, but also, an important component of the Samphire Coast POC population.

For SOC's, peak abundance in 2016/17 (> 150 birds in April, 2017) was higher than in 2017/18 (> 50 in March, 2018). In this last year, high tidal roosting areas for SOC's were identified at the Semaphore South and the northern Outer Harbour breakwaters.

In early March, 2018, the POMs virus, that affects the health of feral Pacific Oysters (*Crassostrea gigas*), was discovered in these oysters occurring within the Port River system, with large numbers reportedly dying. It is too simplistic to relate the cause of the disappearance of POCs in this month to this oyster mortality event, as little is known about the usual diet of POCs in the Port River. Also, SOC's have remained in the Port River, continuing to forage at the Gillman and Snowden's Beach

sites, where POCs were previously most abundant. Also, as Gillman is an area which is popular for digging for bait worms, it is possible that any SOCs and POCs at this site may be feeding on these worms, rather than bivalves. Additionally, SOCs are known to forage for mussels growing on the inner Port Adelaide wharf structures that are exposed on ebbing tides (D. Potter, pers.com.).



**Monthly variation in abundance of Oystercatchers in the Port River in A: 2016/17 and B: 2017/18 (note difference scales on the y axes for the two years).**

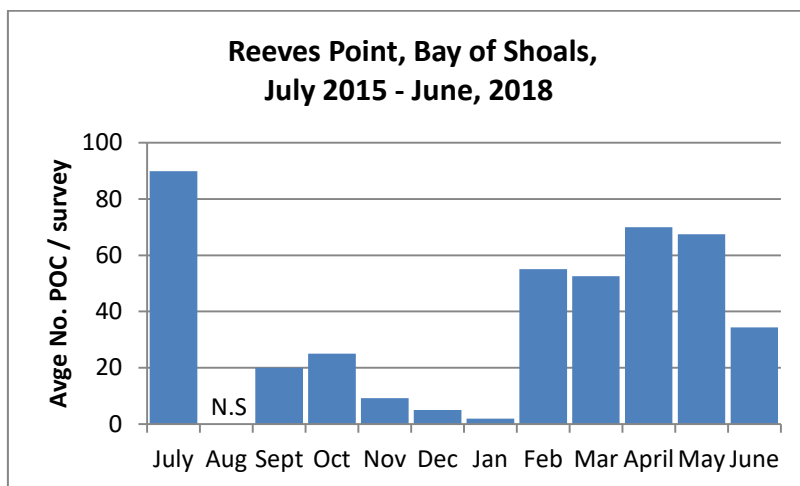
In December, 2017, nesting and rearing of young by adult POCs on the Samphire Coast was reported amongst the samphire habitat at Gawler River (A. Lamanna, Birdlife Aust, pers.com.). Also, a juvenile POC was observed foraging on a beach at West lakes in January, 2018 (M-A van Trigt, Friends of the Adelaide International Bird Sanctuary, pers.com.)



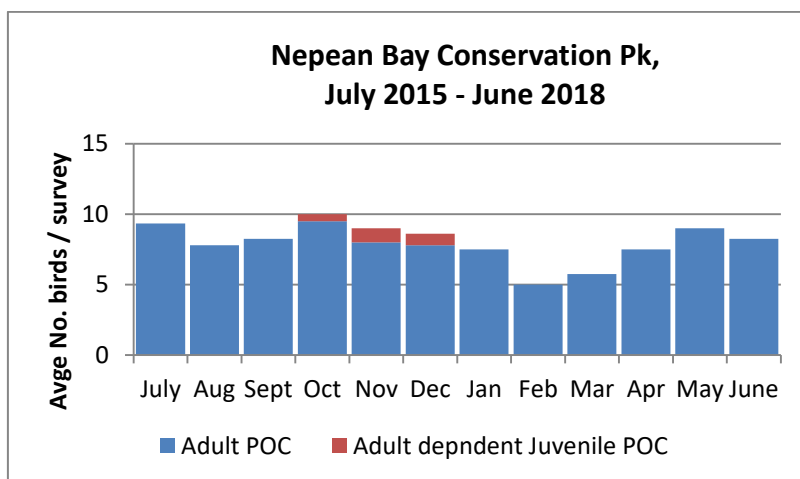
**A juvenile Pied Oystercatcher foraging near the shore at Westlakes, to the south of the Bower Rd causeway, February, 2018. Photo: Mary-Ann van Trigt.**

### 5. Monitoring on the NE Kangaroo Island coast.

For various reasons, a number of months in 2017/18 weren't able to be surveyed in our main areas on KI (Eastern Cove, Nepean Bay and the Bay of Shoals). So, for indicative purposes only, a set of general results of monthly data, amalgamated over the past 3 years (2015 – 2018), are presented here. For each of the 3 areas, the sites include both POC foraging areas at low tide and high tidal roosting areas. The first site (Reeves Point at the Bay of Shoals) is where, possibly, the largest high tidal roosting flock of POCs exists on the island, and at low tide they extensively forage over the exposed flats of the Bay of Shoals. Little nesting has been observed at this site; however, nesting along the northern part of the Bay of Shoals occurs (K. Evans, pers.com.). Highest densities of POCs at Reeves Point are found between February and July, with numbers dropping considerably between September and January, suggesting that the birds have moved elsewhere to breed and bring up their young.

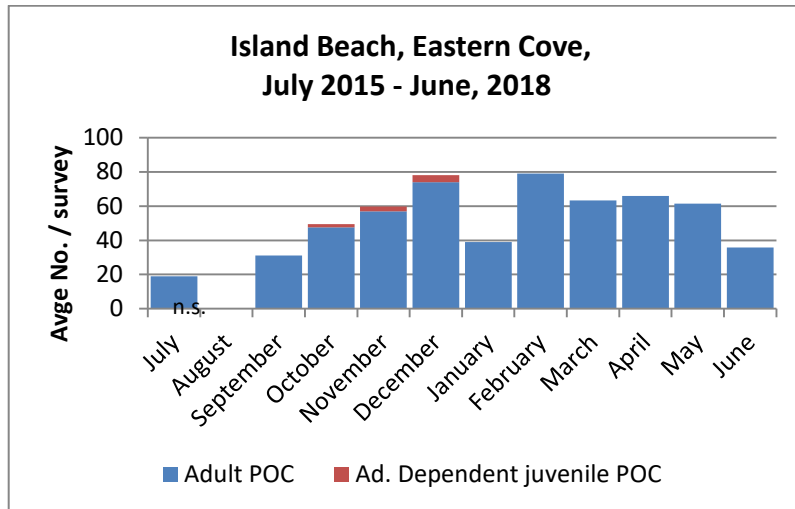


The site at the Nepean Bay Conservation Park contains adult breeding POCs forming permanent territories, with nesting taking place between September and December. Newly fledged Juveniles that are still dependent on adults for feeding and protection are seen between October and December. The slight drop in numbers thereafter, suggests some movement away from the site in February and March. Flagging of juvenile birds at this site would assist in understanding whether there is any connection with the increase in abundance at the Reeves Point from February onwards.





The birds at the third area (Island Beach) occupy both high tidal roosting and low tidal foraging sites at Strawbridge Point (western Island Beach), as well as nesting territories for pairs of adults and the rearing of juveniles further to the eastern part of Island Beach as far as Rocky Point. It is difficult to explain the drop in numbers in January, without disaggregating the data and investigating whether this has commonly occurred in each year surveyed.



In order to obtain best estimates (maximum counts) of the numbers of POCs and SOCs throughout the NE part of KI, all bays and inlets between Penneshaw and Cape Rouge were surveyed over 4 consecutive days in three years (see table below). Counts were made at both roosting and foraging sites. For both species, counts were highest within Eastern Cove and the Bay of Shoals. Over the 3 years surveyed, numbers of POCs haven't substantially changed, however, SOC numbers in the Bay of Shoals were much higher in March 2018 compared with previous years. The SOC's in this area use the Bay of Shoals breakwater (see photo below) as well as the beach immediately to its west as a high tidal roosting area. It was evident that when human activity occurred on the breakwater (eg fishing), the birds resorted to the adjacent beach (K. Evans, D. Potter, pers.com.).

Coastal Area of NE KI	Pied Oystercatchers			Sooty Oystercatchers		
	July, 2015	May, 2016	March, 2018	July, 2015	May, 2016	March, 2018
East Dudley	2	2	0	0	0	0
Eastern Cove	128	122	103	14	3	17
Nepean Bay	26	9	18	0	0	0
Bay of Shoals	142	165	200	72	68	154
<b>Total</b>	<b>298</b>	<b>298</b>	<b>321</b>	<b>87</b>	<b>71</b>	<b>171</b>



**Roosting Sooty Oystercatchers at the Bay of Shoals Breakwater, June, 2018. Photo: K. Evans**

## **6. Future directions.**

These past years of monitoring have shed light on where we need to progress with our program on oystercatchers in the eastern part of South Australia. As previous estimates of Oystercatcher numbers in South Australia have been based on limited sets of data, our original aim in 2011/12 was to determine a cost-effective monitoring method that could be executed by volunteers on a regular basis. This appears to have been achieved in several of our regions, as we now know the roosting and foraging sites and the months when maximum counts can be made. Unfortunately, as shown from limiting banding/flagging programs on POCs, these birds do range beyond the boundaries of our regions of study. Therefore, estimates of total population counts remain elusive, and we should continue to aim to achieve this goal. The following monitoring strategies should be adopted to fulfil this goal:

- a. Undertake quarterly (August, November, February and May) and simultaneous counts of foraging oystercatchers at all sites on the Samphire Coast, ranging from Bald Hill in the north to the Port River and Semaphore in the south. Undertaking these counts at a dodge tide is recommended, as, with minimal tidal movement for about 24 hours, the birds should be within viewing and counting range for a relatively long time. (In the past, we have found that, at times of high diurnal tidal variation, birds can move between foraging and roosting sites within 5 hrs, thus making accurate counts problematic.) A dodge tide occurs in South Australia twice monthly, when the tides don't alter much over about 24 hours and range between 0.6 and 0.8 m. On the Samphire Coast, as the tidal flats can be very expansive (up to 400 m. between high and low tides), the optimal time period for foraging or roosting birds to be observable for birders, who are normally located at the high tide shore line, should be around the dodge tide (C. Rogers, BirdsSA, pers.com.). Where high tidal roosting sites have been identified, counts of Oystercatchers should be undertaken at these sites on high tides. On KI and the SE Fleurieu, simultaneous counts (within 4 days), have been shown to be achievable.
- b. Banding/flagging programs in all three regions and beyond continue to be the most cost-effective way to determine sources of recruitment for the birds to our three regions. For example, for POCs in the SE Fleurieu region, the Victorian and SE SA coastal habitats have been identified as areas from where young birds are recruited.

- c. In our Eastern Cove and Nepean Bay sites on KI, nesting and rearing sites for POCs have been located; however, more surveys directed at breeding areas within the Bay of Shoals on KI as well as on the SE Fleurieu and Samphire coastal areas need to be undertaken. The Oystercatcher Portal supervised by the Beach-nesting team at Birdlife Australia (see # 7.c) will greatly assist in this aim. No breeding by SOCs in our three regions have been noted, and similar questions on their breeding locations may also be answered in this way.
- d. An investigation of the age structure of oystercatcher populations is essential in understanding whether adequate numbers of juveniles recruit to the adult breeding flocks. POCs are known to be relatively long-lived, as much as 34 yrs of age (Taylor *et al*, 2014). Healthy populations may be made up of a number of breeding age groups contributing to the numbers of recruits. Declining populations, on the other hand, may simply be made up of a small number of age groups contributing insufficient numbers of recruits. Therefore, an accurate method for determining ages of both species of Oystercatchers is essential. This can not only be done through flagging programs on newly fledged birds and tracking their sightings over time, but also, through the recognition of different eye (iris) colours of different aged birds. Previous research on similar species (NZ South Island Pied Oystercatcher), found that juveniles (up to 2 yrs. old) had brown irises, 2 yr. old birds with orange/red irises, sub-adult birds with red irises, and adult birds had scarlet irises (Baker, 1974).
- e. The carrying capacities of the different habitats that Oystercatchers occupy need to be investigated by studying the feeding dynamics of birds on these habitats. An understanding of the foraging strategies of Oystercatchers and the seasonal changes in the biomass of different foraged food types (eg bivalves, annelids worms, etc) in estuaries and on beaches is recommended. Also, the birds' foraging rates, both during daylight and at night, is essential for this type of investigation. (Night foraging by Eurasian Oystercatchers is a strategy producing important sustenance to these birds (Hulscher, 1996).
- f. The carrying capacity of breeding areas for different habitats requires the mapping of territories of breeding pairs and relating the size of these territories with the food available to feed their adult-dependent juveniles.
- g. Finally, monitoring human activity (people, dogs, ORVs) as well as natural and feral predators should be continued.

## **7. Additional News.**

### **7a. Australian Indigenous names for Oystercatchers.**

To respect the culture and language of Australian coastal Indigenous communities, an attempt is being made to collate the names given to Oystercatchers by these communities. For example, on the SE Fleurieu coast, members of the Ngarrindjeri community shared the Goolwa Pipi resource with oystercatchers. They have given the name for Oystercatchers as "kuti-pandanwari" (cockle-catcher (Ngarrindjeri Language Group, pers.com.)). Consultation with the Kurna community will similarly explore the Indigenous name for Oystercatchers on the Samphire coast.

## **7b. Communicating our monitoring programs.**

There are a number of ways whereby the results of our monitoring programs can be brought to the attention of peers, coastal managers and the general public. Reports on our activities have and will continue to be provided to the AMLNRM and KINRM coastal management groups. Talks and posters have been presented at conferences (e.g. Australian Beach-nesting Bird Conferences at Portsea, Victoria in 2015 and Willunga in 2017). A PPT presentation of the results of the OYC monitoring program was given at the Goolwa Oystercatcher Workshop in September, 2017. During 2017/18, a short communication has been submitted to Stilt Journal. This paper reports on the foraging of Pied Oystercatchers in grasslands and sheltering of roosting flocks on roads, especially on Kangaroo Island.

## **7c. Introduction of the Beach Nesting Bird Portal for recording counts and breeding of Oystercatchers throughout Australia.**

Early in 2017/18, Birdlife Australia and the Adelaide Mt. Lofty Natural Resources Management Board (AMLNRMB) sponsored workshops at Largs North and Goolwa to introduce volunteers to a method of directly and electronically reporting their data on oystercatchers throughout Australia to Birdlife Australia via a portal on their website. This portal has successfully been operating for Hooded Plovers and Red-capped plovers for a number of years. A number of Team Oystercatcher members in each of our regions have begun to use the portal, and it's hoped new volunteers will take the opportunity to utilise this cost-effective way to gather research information on these species. Interested volunteers can access the portal via the web-site: [www.birdlife.org.au/beach](http://www.birdlife.org.au/beach) .

## **7d. Request for long-term OYC data to Birdlife Australia.**

Recently, two of our team have jointly written to Dr Grainne Maguire, team leader of the Beach Nesting Bird Group at Birdlife Australia, requesting count data collected from the many years of shorebirds 2020 surveys in South Australia. This information on POCs and SOCs will greatly assist our interpretation of the count data that we've already collected. Information of locations where oystercatchers have been flagged and subsequent re-sightings will also assist in formulating further research aims.

## **Acknowledgements.**

I continue to acknowledge the great assistance from a number of volunteers who have assisted with counts on Oystercatchers in our three regions. These include Graeme and Cheryl Casey, Kirsty Darlston, Sarah Dugdale, Keith Evans, Peter Hastwell, Jenny Hiscock, Dave Potter, Mary-Ann van Trigt and Jean Turner. I am grateful to the Ngarrindjeri Language Group who provided valuable discussion about the role of Goolwa Pipis in their culture as well as their name for Oystercatchers for the Fleurieu region. Joris Driesen (Banding Records Coordinator for the Australian Wading Bird Studies Group) is thanked for providing banding/ flagging information on Pied Oystercatchers. Colin Rogers (BirdsSA) provided valuable advice on optimum times for observing and counting wading birds on the Samphire Coast. Members of the Beach-nesting shore bird team from Birdlife Australia, including Aleisa Lamanna, Emma Stevens, Renee Mead, Drs. Grainne Maguire and Kasun Ekanayake, as well as Tony Flaherty of the Adelaide Mt Lofty Natural Resources Group, Paul Jennings of the Kangaroo Island Natural Resources Coastal Management Team and Maureen Christie of the Friends

of Shorebirds SE are also thanked for their encouragement with the project. My thanks also go to to Drs. Nick Whiterod and Sylvia Zukowski of Aquasave for these discussions on Pipi biology along the Goolwa coast. Finally, I thank Dave Potter and Jean Turner for reviewing the drafts of this newsletter.

I welcome any enquiries or comments about the information provided in this newsletter. I can be contacted at: Keith Jones, c/o Sillago Research Pty Ltd, email: [docjones@bigpond.net.au](mailto:docjones@bigpond.net.au), mobile: 0439295990.

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