WA South Coast Shorebird Network newsletter

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Introduction

Welcome to the fourth newsletter linking people within the Natural Resource Management (NRM) sector to shorebird conservation issues on the South Coast.

Thanks to the WA Shorebird 2020 program, the Australasian Wader Study Group and Birds Australia, shorebird conservation has an international and national focus. The aim here is to support their efforts by raising networking support for shorebird conservation locally amongst NRM groups and individuals on WA's south coast.

Effective networking is vital if we are to conserve our precious migratory and resident shorebirds. The idea of a local network grew out of the Living Lakes Network, an international web of NGOs working to protect wetlands and estuaries.

This newsletter focuses on initiatives across the WA South Coast NRM region.

This newsletter forms part of the 2012 South Coast shorebird program supported by Skills, South Coast NRM, Albany Bird Group & BirdLife Australia. The overall South Coast 2012 shorebird program has bee financially supported by Coastwest, South Coast Management Group, the Australian Government's Caring for Our Country Program, South Coast NRM, Lotterywest, and Department of Environment and Conservation. This project has also been supported by the Community Arts Network (WA) which manages the Catalyst Community Arts fund on behalf of the WA Government.

For the Australian Shorebird 2020 website and newsletter see **www.shorebirds.org.au**

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Visitors cannot help but notice the wetlands that form an arc north of Esperance town. Pink Lake is promoted as a tourist attraction and those interested in waterbirds may have used the walking trails and bird hides on the lakes in Woody Lake Nature Reserve. The drive out to Cape Le Grand and Cape Arid National Parks also takes visitors past Mullet Lake and Ewans Lake. In fact, there are about 90 wetlands in the Warden system and 98 species of wetland associated birds have been recorded using them. Designated a Ramsar site in 1990 and then a Recovery Catchment in 1996, and with some of the individual wetlands considered to be of national importance, the conservation significance of these wetlands is well recognised.

Surveys of these wetlands in the 1980s by Birdlife Australia (then Royal Australasian Ornithologists Union) and the Department of Environment and Conservation (DEC) identified 65 species of waterbirds, including 25 shorebird species. Many of the wetlands had large areas of beach and shallow wading zones which expanded in summer as water levels declined. However, from about the late 1980s depths at Lake Warden and the central suite of wetlands (Wheatfield Lake, Woody Lake and Lake Windabout) began to increase, doubling over the next two decades. Increased volumes of water in these wetlands resulted from altered catchment hydrology, together with a number of large episodic rainfall events. While the latter were largely natural (ignoring possible climate-change effects) excess water from the catchment prevented depths declining between such events. This is best illustrated at Lake Warden where there is an especially long record of depth measurements

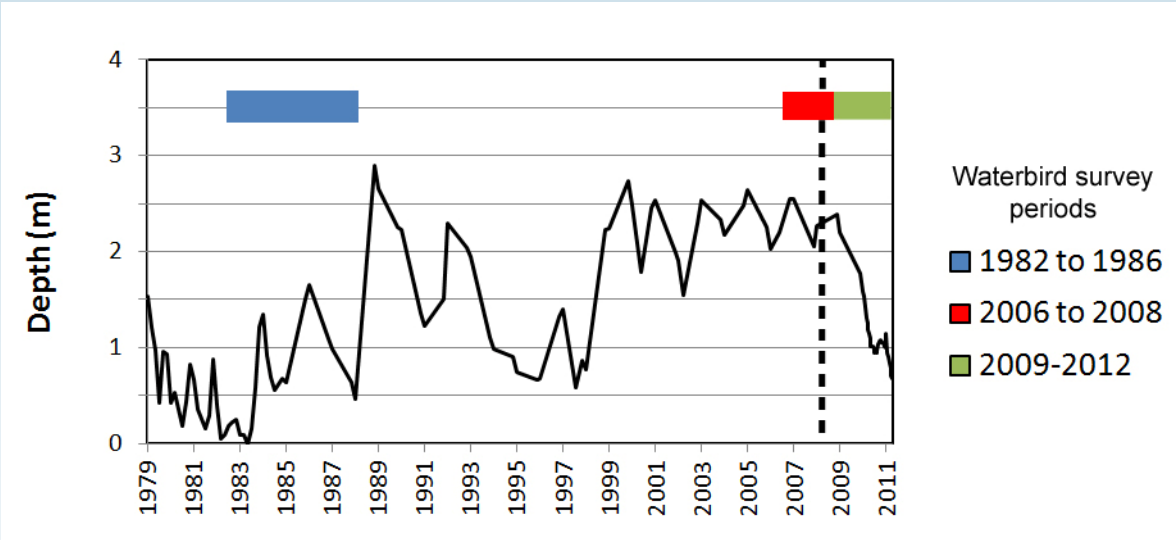


Figure 1: Lake Warden depths and bird survey times

(Figure 1, which also shows timing of waterbird surveys). Persistently elevated depths caused decline in the *Melaleuca* and sedges fringing the lakes and significant changes in waterbird habitats, including reduced beach and shallow water zones. Eighty five percent of waterbird species that used the Esperance wetlands in the 1980s have been recorded since 2006, albeit with significant changes in community composition at many individual wetlands. For instance, there are now more diving species such as cormorants and musk ducks on some of the deeper wetlands. One significant change has been the virtual loss of shorebirds from those wetlands that have experienced greatest increases in depth. Figure 2 shows much lower richness and abundance of shorebirds at Lake Warden between 2006 and 2008 (surveys represented by red columns) compared to the 1980s (blue columns).

The Recovery Catchment Program, funded by the State Salinity Strategy and led by DEC in conjunction with community stakeholders, selects and manages catchments in the south-west agricultural zone to preserve and/or restore biodiversity assets. In the Warden Recovery Catchment, recovery of the shorebird populations, particularly at Lake Warden where large shorebird counts had been made in the past, was a primary objective. To plan for this, engineering options to reduce lake depths were investigated and one of these, a gravity fed pipeline from Lake Wheatfield to Bandy

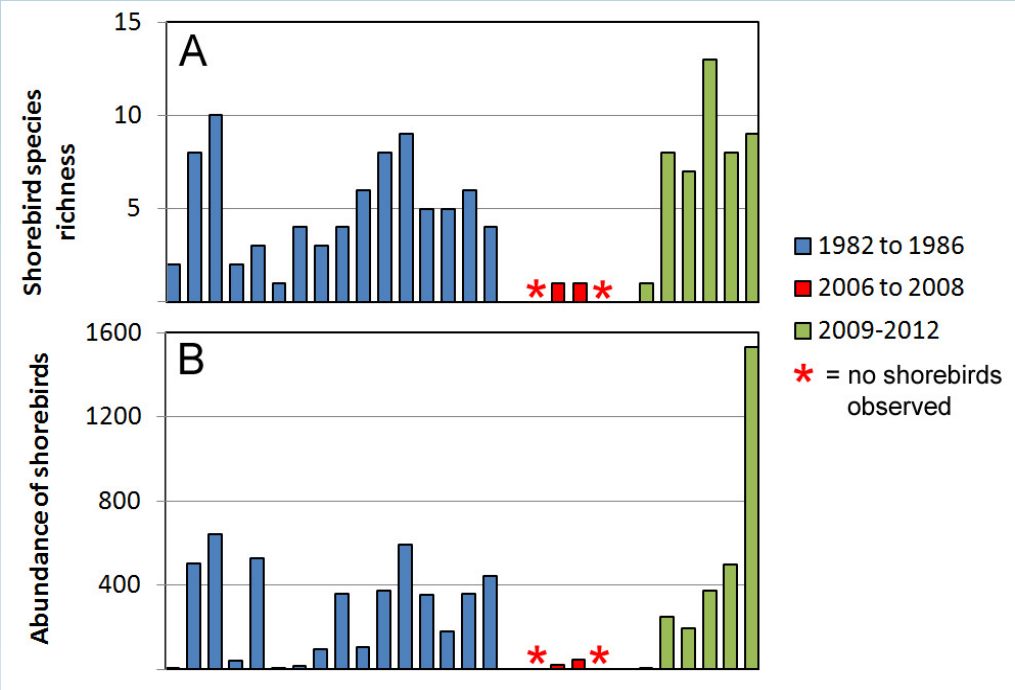


Figure 2: Lake Warden shorebird species richness and abundance

Creek, was installed and began operating in April 2009 (dashed line on Figure 1). This has already had the effects of reducing depths in the central suite of wetlands and contributed to reduced depth at Lake Warden (Figure 1) through reduced frequency of overflows from Windabout Lake. In these wetlands, fringing vegetation is recovering, with melaleucas that were presumed to be dead resprouting and new trees and sedges germinating. Surveys over the most recent years at Lake Warden (green columns in Figure 2A) are showing a return to high shorebird diversity, with 13 species recorded in November 2010. Significant recent observations include 768 red-necked stint, 29 curlew sandpiper, 53 hooded plover and a bar-tailed godwit. It is not only diversity that is returning, but abundances have also increased in the last couple of years. Figure 2B shows that abundance of shorebirds (other than banded stilt) has returned to levels observed during the 1980s. Banded stilt are excluded from this graph because they tend to roam across southern and central Australia in large numbers seeking intermittently inundated salt lakes, often not returning to any one lake in high numbers for many years. They have been recorded at Lake Warden in the last couple of years, but not in the high numbers they were occasionally reported in the 1980s.

While it is early days in the recovery of these wetlands, the results so far are encouraging and give hope that the Warden wetlands will continue to be part of a mosaic of wetlands in the south-west that support endemic and migratory waders.

Footnote: Surveys since 2006 have been funded by DEC and South Coast NRM, with the latter funding from a Caring For Country Grant from the Australian Government. A survey in 2006 and 6 surveys since 2009 have been carried out by DEC whereas 3 surveys between 2007 and 2008 were carried out by Bennelongia Pty Ltd.

Text and figures: Adrian Pinder and John Lizamore, WA Department of Environment and Conservation

Volunteers Give Their Time to Assist the Shorebirds

Volunteers of the Denmark Environment Centre have been kept busy over recent weeks conducting invertebrate surveys in the Wilson Inlet with approximately 300 volunteer hours of work being completed by over fifty youth, student and adult volunteers. It is estimated that by the completion of the project volunteers will have contributed at least 400 hours of their time.

Youth and student volunteers from Denmark High School, Denmark College of Agriculture, WA Junior Naturalists Club and adult volunteers from the Denmark Environment Centre have all contributed to the program with teachers and coordinators from each group also involved.

The volunteers have been conducting sediment core sampling, quadrat and transect surveys in the inlet to form a species list of invertebrates found in the Wilson Inlet. This will assist in determining what shorebirds may be feeding on along with calculating the relative abundance of each species and availability of food to the birds. The University of Western Australia was commissioned by the Denmark Environment Centre in 2011 to conduct some of the intial species identification, analysis and microscope work. As a part of this the Environment Centre Education Officer was able to be trained in species identification so that the work was able to continue in 2012.

Although the compilation of data has not yet been finalised, it appears as though the range of benthic invertebrates in the Wilson Inlet is dominated by polychaetes (bristled worms) and in particular one family group, the nerids. At least 20 different species of invertebrates have been identified in the Wilson Inlet down to their familygroup at a minimum. Samples of one gastropod species found have had to be sent by UWA to the WA Museum, then onto the Sydney Museum and are still awaiting formal identification.

It is expected that the Denmark Environment Centre will hold a general meeting some time in May where the findings of the surveys will be presented to the public.

The Denmark Environment Centre would like to extend their thanks to all the wonderful volunteers whom without the surveys could not have been completed. Funding for the project has been contributed by Coastwest through Green Skills, South Coast NRM through Caring for Our Country and the Department of Water Albany.

Anyone interested in assisting with the final completion of microscope work should contact Kym Phillips at the Denmark Environment Centre 9848 1644.

Text and photos: Kym Phillips, Denmark Environment Centre

Taking samples- Western Australian Junior Naturalists Club

Coring– Brad Kneebone

Sorting samples– Denmark High School students

GPS Locating– Denmark College of Agriculture students

Coring– Denmark College of Agriculture students and teacher

Microscope work– Adult volunteer, Denmark Environment Centre

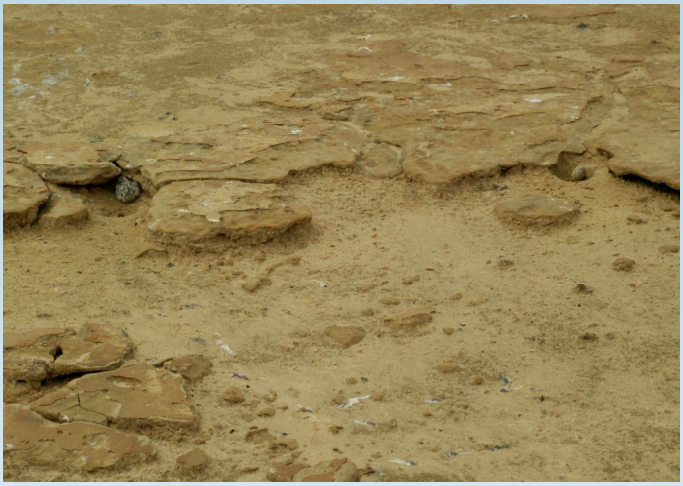
Threatened Species Breeding at Jerdacuttup & Lake Shaster Nature Reserves

Fairy Terns nested in a lake at the Jerdacuttup Lakes Nature Reserve in February 2011. Eighteen nest sites were counted. In late November 2011 Fairy Terns were back at the same site again. Heavy rain in early December flooded this site with approximately 30cm of water and the Fairy Terns left the lake.

Prior to, and during the mid-December 2011 shorebird survey, 9 Hooded Plover nests were observed at several lakes in the Lake Shaster Nature Reserve. At the early February 2012 shorebird count, 38 Hooded Plovers were counted, of which 6 were identified as immature.

There has been a significant increase in fox tracks across the lakes in both Jerdacuttup Lakes Nature Reserve and Lake Shaster Nature Reserve over the last 3 years. A previous February 2010 Hooded Plover count was 92 on one lake in the Lake Shaster N.R.

Text and photos: John Tucker



Fairy Tern chick, at left, and egg, at right; February 2011

Hooded Plover nest in Lake Shaster Nature Reserve; December 2011

Fairy Terns at nest site in rising waters; November 2011

Hooded Plovers at Lake Shaster Nature Reserve; February 2012

South east coast locality map, showing the location of Jerdacuttup Lakes N.R. and Lake Shaster N.R.

Beach-nesting Birds Project Workshops

BirdLife Australia recently held several workshops across Western Australia's south coast to promote the conservation of Hooded Plovers in Western Australia. Workshops and/or field trips were held in Esperance, Bremer Bay, Fitzgerald River National Park, Albany, Walpole, Margaret River and Yalgorup Lakes/ Preston Beach. Grainne Maguire, the Project Manager of BirdLife Australia's Beach-nesting Birds Project, travelled from Victoria to lead these workshops which whose attendees included local experts, interested individuals and representatives of NRM organizations. Below are excerpts from Grainne's report of this series of events. The complete report is available from BirdLife Australia— http://www.birdlife.org.au/ .

Hooded Plovers are unique to southern Australia and are a shorebird the subject of much monitoring and research over the past few decades in both the eastern and western states of Australia. In the summer of 2012, it seemed timely to carry out workshops in Western Australia to share information and look for future collaborations between BirdLife Australia's Beach-nesting Birds' (BNB) project and BirdLife Australia's Western Australian Hooded Plover project.

Field visit to Lake Warden, near Esperance

Since 2006, the BNB project has been operating in Victoria and South Australia involving nest monitoring, research into improving breeding success, and broad scale nest protection, for these exclusive beach and dune nesting pairs. There have also been biennial Hooded Plover counts since 1980 across Victoria and parts of South Australia, which extended in 2008 to include the entire Victorian and South Australian coasts, plus southern NSW. In Western Australia, Hooded Plover monitoring has occurred since 1994 and involves an enormous coordination effort to cover the extensive coastal and salt lake range of the species – here the birds are not exclusive beach-nesters, but instead inhabit inland lake environments, nesting on the shoreline. This presents different monitoring and species management challenges.

Fourth beach, near Esperance

While there are major differences between the habitat and threats to breeding Hooded Plovers in their eastern and western range, there is much to be gained from sharing information on what we know about this species to better its conservation outlook across Australia. Where Hooded Plovers do inhabit beaches and near coastal areas in their Western range, the issues are very similar to those in the east, with major threats arising from visitor pressures (including location of access points; off leash dogs; vehicles above the high-tide mark).

From surveys carried out in Western Australia, it appears that the population has declined and numbers are nowhere as high as once estimated at ~5000-6000 birds in the west. It is more likely that the eastern and western populations combined make this

total, and in that case, the species should qualify for EPBC Act listing as a federally threatened species. Furthermore, if population genetics revealed that the species is actually two distinct subspecies, this would potentially give each a higher conservation status. Quantifying the Western Australian population is a massive feat and volunteers currently do an amazing job to survey an enormous habitat range, often in difficult to access and remote areas. Modeling habitat features which relate to 1) presence of Hooded Plovers and 2) density of Hooded Plovers at lake habitats would be useful for identifying how much available habitat there is, and the conditions which make this habitat suitable. This could then assist with estimating total population size and targeting habitats for surveying and for ground-truthing modeling results.

Point Ann beach, Fitzgerald River National Park, with abundant seaweed for feeding but equally abundant vehicle tracks

There is lots of scope to work more closely together and the BNB project is keen to have more contributions to the National Newsletter 'Word about the Hood' (about any species of beach or shore nesting birds); to share any resources that are developed and ensure they are relevant to WA; to provide advice or any materials for beach-nesting bird education, monitoring, nest site protection or awareness raising; and to fund Deakin University to carry out a genetic exploration of population differences between western and eastern Hooded Plovers. Via our devolved funding from the Australian Government's Caring for our Country, the BNB project will donate 14 GPS units to the WA Hooded Plover monitoring team.

Lake Pollard habitat, Yalgorup Lakes

Text and photos: Grainne Maguire, Project Manager Beach-nesting Birds Project, BirdLife Australia

Hooded Plover juvenile moves from water's edge into water as vehicle passes, Albany region

South Coast Regional Shorebird Survey

A second regional shorebird survey was carried out this year throughout the south coast region and the results have been collated and analysed by Peter Taylor. Below is an excerpt from his report, the full version of which is available from https://docs.google.com/file/d/0B_ZeG8OKjZMTWXhtbENSaHRVRG8/edit

As with the survey and report project of 2011, the main focus of this year's work is on important shorebird habitats with a view to gaining a more informed understanding of the movement and distribution, habitat requirements and threats to both migratory and resident shorebirds present in the South Coast NRM region. However, this year the study area has been expanded to include the entire South Coast NRM region from Walpole to Esperance.

Red-necked Avocet, Esperance region, photo Kristy Quinlan, DEC

Specifically, the project has a number of aims:

- To revisit the sites of the 2011 snap shot survey in order to compare shorebird richness and abundance in February 2012 with that of 2011;
- To collate shorebird richness and abundance data from additional South Coast sites from Bremer Bay to Cape Arid obtained in February 2012 and analyse in comparison with the revisited snap-shot survey sites;
- To identify any further potential sites of international and national significance;
- To investigate particular species identified as exceeding or approaching significance thresholds at any sites;
- To provide recommendations for future conservation activities and research.

Hooded Plover adult (right) and juvenile (left), Esperance region, photo Kristy Quinlan

Sites throughout the survey region were visited during the period February 4-13 and all shorebirds and other waterbird species were identified and counted with the assistance of numerous volunteers. Data was collected in line with Shorebirds 2020 protocols using the standard Shorebird Count Form and/or the BirdLife Australia Hooded Plover Observation Form.

A total of 168 sites were surveyed during this project with shorebirds being recorded at 93 of them. Across these 93 sites 27 shorebirds species were recorded and of these, 17 were migratory species and the other ten were residents. The total shorebird count was 9529 with 4472 being migratory and 5057 residents. Esperance was by far the stronghold for shorebirds throughout the region during these counts. More than 2/3 of the 9000+ birds recorded were located at the 68 sites around Esperance. The highest species count of 19 was also recorded from Esperance as was the highest number of resident shorebird species (10). However more migratory shorebird species were recorded in the Albany Harbours count area (13) compared with nine from Esperance. Inland sites were generally not productive and this may possibly be ex-

Survey in progress, Esperance region, photo John Lizamore, DEC

plained by the lack of suitable feeding habitat in February. Both the Bremer Bay and Hopetoun regions supported greater numbers across a range of sites than the more (people) populated regions of Denmark and Albany to the west. The numbers of resident shorebird species in particular were significantly higher in the Bremer Bay and Hopetoun regions.

Survey in progress, Lake Matilda (near Mount Barker), photo Geoff Taylor

Three sites in the Esperance area were found to support enough shorebirds to qualify them as being significant. Hooded Plover counts at both Lake Carbul (169), in the Lake Gore suite and Davies Lake (84), on private property, exceeded the 1% thresholds of 60 birds. Similarly the Sooty Oystercatcher count at the combined sites of Yokinup and Tagon Bays in the Cape Arid region collectively equalled the 1% threshold of 40 birds. Two other sites came close to 1% thresholds for Sanderling (220 birds), the Gordon Inlet in the Fitzgerald River National Park, east of Bremer Bay and Lake Shaster, east of Hopetoun each with 150 individuals.

Survey in progress, Lake Kwornicup (near Mount Barker), photo Geoff Taylor

For the revisited snap-shot survey sites of 2011 in the western South Coast NRM region, 23 shorebird species, totaling 965 birds were reported from 16 sites compared with 23 shorebird species, totaling 1722 birds from 19 sites in 2011. Abundance was lower for most areas.

Specific threats to shorebirds and their habitat were documented for 35 of the 168 sites surveyed. The major threats were from human disturbance (4WDs, quad-bikes, trail bikes, dogs both on and off leash and horse riding). Also reported from a number of sites were evidence of feral predator species i.e. cats and foxes and non-predatory feral species such as cattle and deer.

Recommendations of this study include:

That community organisations and land managers work to ensure appropriate signage, management regulations and enforcement and neighbourhood education is undertaken as a matter of urgency to improve management of conflicts between recreational use (i.e. dogs, horses, and 4wd vehicles on beaches) and shorebird requirements along the South Coast, with particular concern for improving management of intense pressures at estuary sand bars and other areas frequented by shorebirds. In the western-South Coast NRM region key sites include Rushy Point reserve (Princess Royal Harbour); key foreshore reserves along Oyster Harbour and Wilson Inlet; and popular beach and dune areas at Bremer Bay, Hopetoun and Esperance.

That the appropriate State Government agencies (Dept of Water, Dept Environment and Conservation) and where relevant, the Water Corporation and Local government authorities adopt policies that include careful consideration of shorebird needs, and in particular prevent flooding of priority shorebird habitats in summer through appropriate sand bar opening policies. This applies particularly to Wilson Inlet, but also to other Inlets such as Irwin, Parry and Torbay.

In recognizing the importance of community volunteers to comprehensive long-term shorebird monitoring, that State agencies and regional NRM organisations provide suitable resources to assist with costs for coordination, travel, data collation, data distribution and other needs of volunteer counters.

Denmark Shorebird Kite Workshop and Fiesta

On Saturday 25th Feb 2012, Green Skills ran an action packed community art kite workshop at the Denmark Centre for Sustainable Living. Around 55 adults and children participated, decorating their kites with images of various migratory shorebird species that visit Wilson Inlet each year. The workshop, coordinated by renowned kite artists Michael and Jan Alvares, also featured a talk on the shorebirds of Wilson Inlet by local bird watcher Brad Kneebone. On the Sunday a Kite Flying Fiesta was held on Ocean Beach near the mouth of Wilson Inlet– an important site for migratory shorebirds.

Photos from the Denmark kite decorating workshop and kite flying fiesta, by Basil Schur

Denmark Shorebird Photography and Art Exhibition

Green Skills ran a Shorebird Photographic & Art Exhibition to coincide with the Shorebird Conservation Capacity Building & Training Workshops and Talks by Bill Rutherford and others held from Friday 9th to Monday 12th March 2012 as well as other community activities linked to birds and the Wetland Centre, Denmark.

The exhibition was bigger than originally envisaged and involved shorebird art created by Elizabeth Edmunds (Walpole) and Anna Boaden (Denmark) as well as stunning shorebird photography by Geoff Taylor (Denmark) and Steve Elson (Ongerup). This exhibition ran for 6 weeks from the 20th February to the end of March 2012. The exhibition was formally opened on Friday 9th March 2012 and formed part of the CSL's cultural program supported in part by the Shire of Denmark' cultural development fund. The exhibition overlapped the various shorebird events held over those 6 weeks and was a valuable educational resource.

Top: Geoff Taylor hanging photos for the exhibition. Bottom: Brad Kneebone addresses participants of the Denmark Kite Workshop in the exhibition hall. Photos Basil Schur

March Shorebird Education & Training Program

Green Skills and South Coast NRM, together with expert Bill Rutherford and Allan Collins, and volunteers from Birdlife Australia and the Albany Bird Group, presented three days of shorebird education events in Albany and Denmark from 9 - 11 March which helped build up community efforts to conserve these remarkable bird species across the lower South West. This program was put together with support by South Coast NRM, Coastwest, South Coast Management Group, the WA Department of Environment and the Australian Government's Caring for Country program.

Above: presenters at the Albany Shorebird Forum– top, Bill Rutherford, bottom, Albany SHS students. Below: a presentation at the weekend workshop at Denmark CSL

Local inlets, wetlands and beaches host many species of migratory shorebirds which visit during our summer and breed in the northern hemisphere. Populations of these species are showing alarming declines and their conservation must be addressed at local, national and international levels to protect them. South Coast shores also support resident species such as the vulnerable Hooded Plover. The shorebird events provided people to learn more about these remarkable birds, how to recognise them and how to help work for their conservation.

A half day scientific forum on shorebirds was held at the Albany campus of University of Western Australia on Friday 9th March. A Panel of presenters including Bill Rutherford, Adrian Pinder (DEC Senior Research Scientist), Anne Bondin and Brad Kneebone (Albany Bird Group) and Tracy Brothers, a teacher along with two of her Marine Science, Albany Senior High School Science Students. Around 32 people attended the forum which encouraged thoughtful discussion on shorebird conservation and science. Conservation success stories and challenges were highlighted.

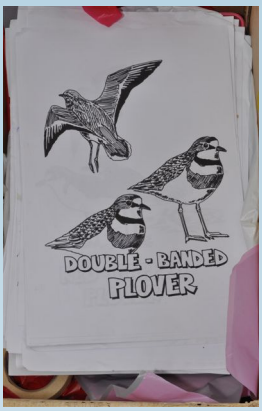
On the evening of Friday 9th March, well know shorebird expert Bill Rutherford presented a talk entitled "Migratory Shorebird Conservation: The International Perspective along the East Asian/ Australasian Flyway" at the Centre for Sustainable Living (CSL). The 28 attendees were informed about conservation along the flyway- the international flight path of our migratory visitors followed by a discussion on what local communities can do to help protect these special birds. This event corresponded to an opening of the Shorebird Art and Photographic exhibition with contributions by Geoff Taylor, Steve Elson, Anna Boaden and Elizabeth Edmonds.

Around 35 people attended training workshops on Saturday and Sunday, based from the CSL and which included visits to prime shorebirds sites at Morley Beach, Wilson Inlet & Princess Royal Harbour, Albany. Under good weather conditions, Bill Rutherford and Allan Collins with support from the Albany Bird Group provided detailed information about our amazing shorebirds, their biology and conservation, and demonstrated how to identify

Photos from the weekend workshops. Above: At Morley Beach, Wilson Inlet Below, at Rushy Point, Albany. Photos by Basil Schur.

Albany Shorebird Kite Workshop

A second kite workshop and fiesta was held in Albany on the weekend of 24—25 March. Michael Alvares, a well known kite artist and his partner Jan Alvares, working with local environmental and bird experts, ran the workshop at the WA Museum on Saturday. 58 youth and adult participants made kites with a shorebird theme, form or message. Michael and Jan then led the group in flying the kites as part of a high profile all day community event on Sunday, at Anzac Peace Park on Albany's Princess Royal Harbour foreshore, an important migratory shorebird site. This event involved the workshop participants and captured the attention of hundreds of spectators and passers-by. Participants and their kites from these events were invited to join in other community bird related events on the south coast relating to shorebirds.



Photos from the Albany kite decorating workshop and kite flying fiesta, John King

The Albany and Denmark Shorebird Kite projects were supported by the Community Arts Network (WA) which manages the Catalyst Community Arts fund on behalf of the WA Government, Lotterywest, as well as the overall South Coast Shorebird 2012 program (see newsletter cover).







Replacement of Torbay Hooded Plover Sign

Thanks to support from South Coast NRM, Green Skills was able to have a vandalized shorebird sign restored at the Mutton Bird Lookout car park/look out over Cosy Corner Beach. This photo shows two Green Skills workers assisting with putting up the Hooded Plover conservation sign at this City of Albany reserve.

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