This newsletter provides a window into a tiny fraction of the activities of the Animal Demography Unit. We encourage everyone who reads it to become an ambassador for biodiversity. You achieve this by reading these four articles carefully, and then retelling the stories in your office, at your braai, or wherever you are. There is some fascinating information.

On Fridays, you can celebrate the arrival of the weekend by “sharing” the TGIIFF (Thank Goodness It’s Frog Friday) with family and friends from our Facebook “page” to your Facebook “timeline.” And on the weekend, you can amaze your guests by telling them that dragonflies are actually quite easy to photograph, and be able to explain why. Read on!

Les Underhill, ADU Director
SEVEN “SPECIES DAYS” A WEEK AT THE ANIMAL DEMOGRAPHY UNIT

As part of our thrust at enabling our citizen scientists to become ambassadors for biodiversity, we do a series of “species days.” These appear on both on the ADU Facebook page and the ADU websites. The species days are a fabulous way to teach and inform the public about the wonderful biodiversity of Africa, as well promoting the Virtual Museums, and getting people excited about biodiversity conservation.

The credit for inventing the entire “species day” concept goes to Tali Hoffman, who was the alliterative pioneer of “Mad Mammal Mondays” which has been repeated for all the other species days. So there is no possibility of doing a butterfly day, and moths would have to share Monday with the mammals! On Monday of each week, we wait with interest to find out which African mammal has been chosen for spotlighting by Tali and her team of three MammalMAP interns: Nelly, Annette and Fay.

Sappi Tree Tuesdays. Sappi is the appropriate sponsor of Tree Tuesday because this company’s core business is involved with the growing of trees. 554 000ha of land is owned or managed by Sappi; 35% is not planted, and of this 165 000 ha is managed for conservation and biodiversity protection. Not only does Sappi grow trees in commercial plantations but the company is also involved in indigenous trees projects within rural and urban communities. Sappi was also the sponsor of the paper for the butterfly atlas book. From the ADU side, we hope one day to do a “tree atlas.”

Gravit8 Weaver Wednesday. Gravit8 is small but growing an information systems company in Cape Town, but operating throughout South Africa. Gravit8 does networks. This makes this company a good fit with weavers, which build nests which consist of the most intricate and complex networks constructed by any animal.

Another educational commitment to trees is the five regional Sappi Tree Spotting books. It is not often grasped that commercial timber plantations produce not only paper but also a variety of timber products, such as cellulose which finds its way into our everyday lives in textiles, the bulking material in medical pills, cell phone components, and all sorts of other things.

There are 117 species of weavers, enough to keep Weaver Wednesday going for just over two years! Weavers are a special focus in the Animal Demography Unit, with the PHOWN (=PHOtos of Weaver Nests) Virtual Museum being our first all-Africa project. PHOWN is assembling an
amazing visual database of weaver breeding activity throughout Africa.

**Threat Thursdays.** Across all the taxa in the assorted Animal Demography Unit projects, there are many threatened species. Thursday is the day of the week on which we pause to consider one of these species.

**Thank Goodness It’s Frog Friday (TGIFF).** On Fridays we have a look at the wet and wonderful amphibians across Africa. Each Friday we choose a different frog or toad accompanied by interesting information about the featured species and a photo, usually chosen from the database of the FrogMAP Virtual Museum, so get out there and find those froggies! Your photo might be featured next!

**Scorpion Saturday.** For many months, Saturday stood isolated as the only day of the week that was not a “Species Day”, but in March this year, the newest Virtual Museum, called ScorpionMAP, was created and so Scorpion Saturday was born! Scorpions are amazingly interesting creepy crawlies that occur all over Africa and what better way is there to learn about these arthropods than to feature a different scorpion species each week.

**Snake Sunday** is the day on which snakes to step, or shall we rather say slither, into the spotlight. This Species Day is also a great platform to feature the ReptileMAP Virtual Museum. ReptileMAP is the continuation of the Southern African Reptile Conservation Assessment (SARCA) project which ran from 2005 until 2009.

ReptileMAP aims to improve public awareness of the value and plight of reptiles and also provide conservation agencies with a clear definition of conservation priorities that will help them to plan their activities.

Only two of the seven “days” have sponsors. So there are five great sponsorship opportunities. If you or your company would like to sponsors one of the other days, please contact Les Underhill (les.underhill@uct.ac.za).

**Useful resources:**
ADU on Facebook: [http://www.facebook.com/animal.demography.unit](http://www.facebook.com/animal.demography.unit)
ADU website: [http://ad.org.za](http://ad.org.za)

Megan Loftie-Eaton and Les Underhill
SAFRING – RECENT INTERESTING LONGEVITIES

All reports of rings on dead birds are valuable for on-going data collection for survival analysis, but nowadays new records of maximum longevity or farthest distance moved are scarce. In the past few months three interesting records of longevity have been received.

Cape Gannet 953515 was ringed as a chick on Bird Island, Eastern Cape, on 29 February 1984 by Norbert Klages and found dead near Kenton-on-Sea on 25 January 2013, an amazing 28.9 years later. Over the last 60 years of ringing in southern Africa, there have been just over 20 gannets which had greater elapsed times than this bird. The ultimate longevity record is at 36 years. Nevertheless gannet 953515 adds to our data of long lived gannets.

Another old bird was African Black Oystercatcher 637029 that was ringed as an adult by Tony Tree on 27 September 1997 at Cape Recife, Eastern Cape. It was resighted at the same site by Sophie Kohler on 22 December 2009, but that is not the end of the story. It was found dead by Albert Schultz on 17 April 2013, again at the same site, a total of 15.6 years after ringing. The longevity record for this species is 28.9 years.

Village Weaver CC45212 was ringed as an adult bird at Merrivale, KwaZulu-Natal, by Dale Forbes on 9 September 2001. It was recaptured at the same site by Mark Brown on 1 May 2002, and again by Karin Nelson on 1 February 2013. The bird is still alive, with the maximum elapsed time being 11.4 years. The longevity record is 13.9 years, so if CC45212 is recaptured again in the next few years it may become the new record holder! In captivity the Village Weaver has reached 24 years. See an up-to-date list of southern African weaver longevity records at http://weavers.adu.org.za/wow_age.php

There are more details on the above three records on the web:
Cape Gannet
African Black Oystercatcher
Village Weaver

Please check any birds you may encounter for rings. Please report any bird rings that you find on the SAFRING website at http://safring.adu.org.za/retrap.php

H. Dieter Oschadleus
WADERS OF THE KENYAN COAST: MOULT AND MIGRATION

Many wader species are well known long-distance migrants and traverse the globe from one end to the other. A number of these have been well-studied and relatively much is known about their biology and migration particularly in Europe and also southern Africa. However on the equator in East Africa little work has been done on these fascinating globe-trotters and much of their secrets remain unknown as to how they do it and what they need in order to survive. Three species in particular have had next to nothing studied about them – Greater Sand Plover, Lesser Sand Plover and Terek Sandpiper – and all three have one of their main East African non-breeding sites at Mida Creek near Watamu on the north Kenyan coast. These are the core species for my PhD studies.

Mida Creek is recognised internationally as being an ‘Important Bird Area’ (IBA) under the BirdLife International criteria. It is a particularly important site for large number of both Greater and Lesser Sand Plovers which at peak times exceed 1% of the regional population. In our counts we have counted up to 1600 Greaters and 1500 Lessers. These two species often form a large proportion of the birds which we capture to ring at Mida. The Greater Sand Plovers that spend the non-breeding season in East Africa breed in central Asia and spread out all along the eastern coastline of Africa with a few reaching as far south as the Western Cape. Lesser Sand Plovers breed farther east in Asia and do not go as far south along the eastern Africa during the non-breeding season than Greaters. Mida Creek is probably the most southerly concentration of Lessers of any significant size. Terek Sandpipers that spend the northern winter in Africa originate from western Russia and the Baltic states and spread out along the entire eastern coastline of Africa though with a concentration in East Africa, particularly Tanzania, with Mida Creek having some of the largest populations in Kenya.

This study focuses on the migration and moult strategies of these three species with the aim of describing their different patterns along the East African coast, comparing this with the strategies of the populations of the same species that spend the non-breeding season in Australia, and seeking to understand what drives the processes involved. Migration and moult are two of the three most energy-expensive activities that a bird undertakes in its annual cycle; the third is reproduction. The timing of both migration and moult are closely linked to food availability and the condition of the bird. All three species moult...
on their non-breeding grounds in Africa. Mida Creek, with its excellent feeding grounds and relatively undisturbed conditions, makes it a good place for a bird to undergo moult.

Studying these patterns has involved many long nights spent trapping and ringing waders on Mida Creek – necessarily at night because the exposed conditions of sand flats mean mist nets are visible in the day. To date I have accumulated data for over 1000 individuals of each of the three species and have also been attaching uniquely numbered colour leg flags to birds for the past two years which can be read in the field through a telescope. From c. 10 000 waders ringed on the Kenyan coast in the East African ringing database, only two have ever been recovered elsewhere – one was a Lesser Sand Plover found in Pakistan in the 1980s and the other was one of my Terek Sandpipers ringed in 2003 and found breeding in Finland in 2008 by an ornithologist studying the tiny Finnish population. By putting leg flags on birds I hope to receive more reports of them from birders watching waders somewhere else along the migration route and so work out more details about the actual route and timing of their migration. I have not received any reports yet – but have seen three Greater Sand Plovers at the Sabaki River Mouth some 25 km north of Mida during the northern summer months showing that non-breeding birds move at least a little away from the normal non-breeding grounds; we also found one Terek Sandpiper on salt pans c. 40 km north of Mida in January, again showing that they are not entirely faithful to a single non-breeding site – though many do seem to be from the high number of recaptures we have at Mida.

Analysis of moult timing and duration is ongoing using the moult package in R. The aim is to publish several papers describing the moult strategies and how these relate to migration timing and breeding success.

The Tasso Leventis Foundation has generously supported my PhD together with A Rocha Kenya which has underwritten most of the core costs for which I am extremely grateful.

Colin Jackson

Colin Jackson is one of the ADU’s PhD students, based at Watamu, Kenya
OdonataMAP IS ODD

O

f all the Animal Demography Unit’s projects, there is one that sticks out like a sore thumb!

Whereas we have to work really hard to gain participation in most projects, OdonataMAP has somehow captured the imagination of a substantial number of people, and its database is growing like topsy. The Odonata is the technical name for the dragonflies and damselflies. An “oder” is to dragonflies what a “birder” is to birds. Project promotion for OdonataMAP has been limited to a few news items on the ADU website; the most recent are http://adu.org.za/news.php?id=3769 entitled “OdonataMAP: ‘What a terrific response’ says Warwick Tarboton, faced with 1514 records to identify!” and news items http://adu.org.za/news.php?id=3618 “Become an ODER and go ODING.” Both are worth a visit, because they contain links to other resources.

When we started the frog atlas in 1996, the total database of distribution records in museums, conservation authorities and private collections of researchers was approximately 17,000 historical records, some of which dated back a 100 years. The number of specimen records for Odonata is much the same size. The numbers of species involved are fairly similar too: there were 115 frog species at the time of the frog atlas, and there are 159 Odonata species, 90 dragonflies and 69 damselflies in South Africa.

In seven years of pretty intense data collection for the frog atlas, diligent and dedicated fieldwork yielded an additional 25,000 records of amphibian distribution. Thus the size of the distribution database was more than doubled by this project. But the annual number of records added via a lot of expensive fieldwork was only about 3500 frog records per year. Incredibly, the number of records submitted to OdonataMAP in the seven months October 2012 to April 2013 was 3540! A remarkable achievement.

In total, OdonataMAP now has 5082 records. Put these alongside the historical records, and we have already increased the available database of distribution records by roughly a third. Each record in the database is backed up by a photograph. “Gosh,” I hear you say, “it must be ruddy hard to take a decent photo of a dragonfly!” – That turns out to be totally not the case!

With a bit of patience, dragonflies and damselflies are quite easy to photograph. And a lot of fun! They frequently return to a perch after each foraging trip. They are certainly less of a challenge to photograph than butterflies. The best times of the day are the mornings once it has started warming up – that means that unlike birders, oders do not need to be up and about at the crack of dawn. The middle, hot, part of the day, when dragonflies and damselflies are most active, can be a less rewarding time for photography, because they move so fast and rest so little. It gets easier to
take photography once the afternoon starts cooling off. The summer months, September to April are best, because this is the peak period for dragonflies and damselflies. There are some excellent resources for photography on the internet:

http://photonaturalist.net/how-to-photograph-dragonflies-free-ebook/


http://www.wikihow.com/Photograph-a-Dragonfly

http://digital-photography-school.com/how-to-photograph-dragonflies

The first of these to an e-book which you can download free. Also, bear in mind that for OdonataMAP purposes, perfectly composed and focused photos are not essential. All we are looking for in all the Virtual Museum projects are photographs from which the species can be identified without ambiguity.

Warwick Tarboton undertakes the identifications for OdonataMAP. He is delighted at the response. There are already range extensions, and confirmations of hypothetical ranges in the fieldguides.

So, when spring comes round again, you need to have studied all these photographic resources. You will then quickly be able to get up to speed, and start submitting records to OdonataMAP. The database has records for 381 of the 2008 quarter degree grid cells in South Africa, Lesotho and Swaziland.

OdonataMAP coverage, by quarter degree grid cell. Cells shaded yellow have one species recorded, and those shaded orange have two. Red cells have three or four species, light blue cells have five to nine, and dark blue cells have 10 or more species. There is data for 381 cells, 19% of the South Africa, Lesotho and Swaziland.

Les Underhill and Rene Navarro
The Animal Demography Unit would like to thank all the partners and sponsors for making all these projects possible.
Any donation (regardless of the amount) is very welcome and will be greatly appreciated. If you would like to make a donation to the Animal Demography Unit or to a specific project of the research unit, please use the information below.

All donations should go through the University of Cape Town donations account before being transferred to the Animal Demography Unit. It is therefore very important that you mention the Animal Demography Unit when doing a donation. If you do an EFT, please use the number 231454 as “Beneficiary reference”. This is the number of the fund at UCT to which it needs to be transferred. Please, send an email to Abieda.Abrahams@uct.ac.za and Sue.Kuyper@uct.ac.za.

If you would like more information, please use the contact details provided below:

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Bussière Elsa: photos on the cover page and the table of contents
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Jackson Colin: photos p4 and p6
Underhill Les: photo 1, p6
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Oschadleus Dieter: village weaver p3
PHOWN record: vitelline masked weaver p1
Rueda Eukene: African black oyster catcher p3
Tomsett G: western stripe-bellied sand snake (reptileMAP record) p3
Van der Bank M: giant raisin tree p1
This is the message of the new EU campaign on biodiversity aiming to raise awareness of the fact that we humans are not only a part of the larger web of life, called biodiversity, but that we are interlinked with it and interdependent with all of its elements. The campaign shows the real implications biodiversity loss will have for our daily lives and promotes actions people can take to protect nature.