

Stephen Debus chat 1st session 8/25/12

8:24 aussie-birdlover: <http://www.sea-eaglecam.org/video.html>

8:27 aussie-birdlover: is everyone there and ready?

8:30 aussie-birdlover: Dr Stephen Debus is Postdoctoral Fellow, Faculty of Arts and Sciences, School of Environmental and Rural Sciences at the University of New England.

He is also the author of the Australian raptor field guide "The Birds of Prey of Australia: A Field Guide".

Stephen has also done extensive study and written a number of papers about White-bellied Sea-Eagle (WBSE).

And is reputed to be one of the world leaders in knowledge about the WBSE.

If time allows there will be two chat sessions 8:30am to 9:30am and then 2:30 to 3:30pm. Stephen will be at the Discovery Centre during the chat sessions.

A link to Stephen's book can be found here <http://www.publish.csiro.au/pid/6654.htm>

8:33 emmTas: Still just getting things settled - won't be long

8:33 emmTas: How many viewers do we have at the moment? (Can't see that on iPad)

8:34 andimal23: i didn't miss it did i?

8:34 FaithyMD: no andi

8:34 shuff1: Just in time andi..

8:34 emmTas: just a technical difficulty at the moment but nearly there

8:37 FaithyMD: chatters thanks for your patience

8:37 emmTas: aussie Steve about to log in so please smurf him

8:41 aussie-birdlover: Welcome Stephen!

8:41 emmTas: sorry, Ustream being flakey

8:41 emmTas: but we are ready to go now

8:41 stephendebus: Good Morning

8:41 emmTas: thanks for your patience everyone

8:42 FaithyMD: welcome - thanks for coming

8:42 shuff1: Good Morning Dr Debus.

8:42 kellirooney: Pleased to have you with us Dr. Debus

8:42 andimal23: welcome to our nest Dr. Debus

8:42 stephendebus: Pleasure to be here

8:43 stephendebus: I have a list of pre-submitted questions that I'll go through first, if that's ok

8:43 stephendebus: Q interesting story or experience

8:43 stephendebus: Being a volunteer on the RAOU Red Goshawk project in the NT, and finding and observing their nests, must be the outstanding highlight. Witnessing a Wedge-tailed Eagle chick's first flight, after watching the nest from the renovation and mating stage, was special. Doing a groundbreaking study on the Little Eagle was another lifetime highlight.

8:44 stephendebus: from Jhim40 - Q regarding sea-eagles spending their time on the nest.

8:44 stephendebus: It might depend on what's going on in the sitting eagle's line(s) of sight, e.g. human or other activity? return flight path(s) of mate with food? I've noticed that the larger the raptor species, the 'slower' it is to do things; BEs are much bigger than WBSE.

8:45 stephendebus: Grotto - single nest tree

8:45 stephendebus: Some WBSE data from Tasmania: up to 20+ years recorded so far, but use of alternative or new nests seems to be fairly common too. (Up to 40+ years of re-use recorded for Wedge-tails).

8:46 stephendebus: jocast - delaying egg hatching

8:46 stephendebus: Not that I'm aware of. Raptors lay when the nest is ready for eggs and the female has the body condition to produce eggs. Raptors lay in the normal seasonal window even if they have to build a nest first. She laid this year within the usual laying season for that latitude.

8:47 stephendebus: faithy Do females hold alertness after an event for an hour or so?

8:47 stephendebus: It might depend on the nature of the event. If a predator or competitor (other Sea-Eagle or raptor) was repelled from the nest area, the female may remain on alert for some time if the threat is still visible, say in the distance.

8:47 stephendebus: perch What do you think is the key to the WBSE's survival in the future?

8:47 stephendebus: For this pair, I'd say continued clean-up of toxins in the water, retention of safe, undisturbed nesting habitat, and continued wardening. For the species in SE Australia, I'd say reservation of adequate breeding habitat and foraging space on the coastline, and increased legal protection in NSW, i.e. listing as Vulnerable.

8:48 stephendebus: Shuff Yes, I would like to know what Steve thinks about S2 appearing on the nest this year

8:48 stephendebus: Quite likely it was S2 reappearing; not that surprising, as I've seen other yearlings tolerated near the next year's nest at the start of the season (but not seen them after eggs are laid). I don't know how often it happens, as it hasn't been studied; would need juveniles colour-banded when they fledge.

8:48 stephendebus: Shuff - I would like to know what challenges or unknowns he is trying to solve regarding the sea eagles or any other raptor.

8:48 stephendebus: I have simply been trying to thoroughly document the complete breeding cycle (breeding biology and behaviour), from nest-building or selection to independence of juveniles, of the little-studied species, and determine some of their ecological requirements, e.g. nest-site characteristics, food and foraging.

8:49 stephendebus: where he is focusing his research and what he hopes to find?

8:49 stephendebus: I'm working on the response of nesting Sea-Eagles to human activities and attempts at mitigation, and I hope to have some recommendations for future cases where nests are threatened by development. For other species, I'm just trying to find out the basics; this year it's Black Falcon and I hope to finally get the full story from laying to fledge

8:49 stephendebus: more shuff - what things he finds to be groundbreaking in the research and information he has gathered over the years.

8:50 stephendebus: New, previously unrecorded knowledge about the basic biology of the Black-shouldered Kite, Square-tailed Kite, WBSE, Collared Sparrowhawk, Wedge-tailed Eagle (breeding

behaviour), Little Eagle,

8:50 stephendebus: Australian Hobby and Black Falcon. It was groundbreaking only because no one had done it before in that detail. What have I found surprising and what has supported the base assumptions about the WBSE. My behavioural study of the breeding cycle of the WBSE was pretty much all new. The info supported most prior assumptions, but challenged them on the length of incubation, nestling and post-fledging dependence periods, and sex roles during the nestling period. E.g., male and female alternated roles in hunting and tending the chicks, instead of the assumed division of labour.

8:51 stephendebus: Andie I would also be interested to know about egg laying and incubation delay

8:51 stephendebus: I don't have personal data; EagleCAM should have in due course. Hatching sequence is determined by when the female starts continuous incubation in relation to laying of the first and subsequent egg(s). Asynchronous hatching puts the younger eaglet(s) at a competitive disadvantage; I don't know whether parent sea-eagles manipulate this according to food supply.

8:51 stephendebus: Linda I am interested in talon grip strength of goshawk and WBSE,

8:52 stephendebus: Our Brown Goshawk (fem. ~600 g) painfully strong, punctured my hand. WBSE, a colleague had one put its hind claw right through her arm between radius and ulna.

I know of no hard data (psi). Northern Goshawk would, on body weight, be like our fem. Little Eagle (~1 kg); I'm glad a LE got her hind claw under my watch band, not in my wrist (male, ~650 g, gripping my hand was bad enough).

8:52 stephendebus: beak psi. A nip by a Wedge-tail (body size = WBSE) was fairly trivial (a large cockatoo is worse), but I've heard a WBSE can bite chunks out of human flesh. And that's without the opposing force of holding with the feet, where the real power comes into play.

8:53 stephendebus: how powerful are the killing tools of these birds?

8:53 stephendebus: Eagle talons are bone-piercing on the usual prey sizes; WTE can kill things like foxes by the claws penetrating the skull when the feet are locked on. Rabbits are killed by the sheer grip pressure squeezing the thorax. Hawks/eagles kill with the feet. Falcons kill by seizing with the feet then biting through the neck vertebrae, so they have powerful beaks and feet.

8:53 stephendebus: Northern Gos is at least twice as heavy as a Brown Gos, and LSE is smaller than a WBSE; a female Nthn Gos would nearly match a LSE fledgling in size, whereas a Brown Gos would be no match for a nearly fledged WBSE. A downy chick might be a different matter; I had a currawong take a Little Eagle chick a week old.

8:54 stephendebus: Gary Why are large raptors important and do they have a benefit to mankind?

8:54 stephendebus: They are at the top of the food chain, have a 'top-down' role in regulating fauna communities, 'weed out' the sick and unfit, have a role in evolutionary selection pressure on prey characteristics. That is, they keep other species and ecosystems 'healthy'. They are also important indicator and sentinel species ('canaries' in the global coalmine). Their presence has many non-material benefits to too ('wilderness value' etc.).

8:54 stephendebus: Are WBSE numbers limited at the moment because of available Habitat in Australia?

8:55 stephendebus: Yes, I think they are at carrying capacity for the available food and habitat, except around urban areas where mortality may be unnaturally high because of toxins.

8:55 stephendebus: Did logging methods in the days of the hand cross cut saw help with the retaining

of trees that are now used as nest?

8:55 stephendebus: Hard to answer. I suspect the old selective logging method left some trees with old-growth characteristics that had no commercial value (toognarled, twisted, dead-topped etc.) but made good nesting trees

8:55 stephendebus: Comments regarding wind farms

8:56 stephendebus: So far there are no records of WBSE casualties at Windfarms; they're all Wedge-tails. By extrapolating from the severity profile of other types of collisions, a colleague has determined for the 21 WTEs found dead at Tas. windfarms, there are probably another 40 casualties, of varying severity (most ultimately fatal), not found. It seems the bigger and less agile the raptor, the more susceptible.

8:56 stephendebus: Greentea Yes, I was wondering about mum & dad's honking yesterday
Yes, male honking is faster than female's.

8:58 emmTas: There are just a few more pre-answered questions to deal with (Steve is just printing them)

8:59 priscillash: ty emm & Stephen

8:59 shuff1: This has been excellent.

8:59 kellirooney: Outstanding information, thank you so much!

8:59 sweetsue13-1: and a break for bobble heads!

8:59 priscillash: lol

9:00 priscillash: even dad WBSE showed up for chat

9:00 emmTas: we have the sounds thru 2 large speakers here

9:00 emmTas: it's deafening

9:02 aussie-birdlover: shall we unpause chat for questions or are there still some resubmitted ones to do, emm?

9:02 andimal23: In North America, bald eagles are larger in the north (cold) and smaller in the south (warm). I wonder if WBSE are similar (larger in southern cold parts and smaller in warmer northern parts)

9:02 emmTas: just getting these last resubmitted questions

9:03 emmTas: I can answer that Andie - yes large in the south

9:03 emmTas: Wedgies are larger too - in Tasmania (further south) we have our own subspecies, larger than mainland

9:04 grotto56: yes

9:04 andimal23: and for those who are new to chat, the wedge tailed eagle is the largest eagle in australia - and also significantly larger than a bald eagle (we saw them side by side at the World Bird Sanctuary)

9:04 priscillash: ty andi

9:05 andimal23: wow emm, a wedge tailed eagle subspecies ... would love to see that

9:07 andimal23: emm, tell us about the raptor program you will be going to while we wait for steve

9:08 emmTas: it's a course that Steve has run before BirdLife Australia

9:08 emmTas: OK, we are ready & can take Qs from you all

9:08 aussie-birdlover: OK chat to be unpaused, don't all talk at once!

9:09 aussie-birdlover: I think perch had a question

9:05 perchporch: Not my Q but from a chatter this week & thought it was good photofun: Why does it seem if WBSE have 2 eggs generally data says only 1 fledges

9:09 stephendebus: Answer to Perch - sometimes due to siblicide or where one out competes the other for food.

9:10 FaithyMD: Is the siblicide documented - or assumed

9:12 stephendebus: Siblicide is documented in WBSE

9:13 FaithyMD: ty

9:09 fitzwilliam: (q) chatter earlier asked about impact of DDT on Australian raptors, specifically wbse

9:10 stephendebus: Fitz - WBSE were one of the species in Australia who's egg shells were thinned by DDT but DDT was banned in 1987 (ish) The only species we have data for is peregrine falcon and they have recovered

9:10 jocast1: QQ Is there any information about how close to the natal tree the WBSE's return to build their nests?

9:11 priscillash: QQ any future plans for banding any WBSE

9:13 stephendebus: Not by me except for rehab birds

9:14 kerbus: Why dont we band WBSE here at this site, or do we?

9:14 andimal23: kerbus, at this time, banding is not done at this nest

9:15 andimal23: dr. debus can answer why banding is not typically done on WBSE

9:13 feather1: do you know what stage of incubation the parent is aware of movement of the chick in the egg?

9:14 stephendebus: When the young start cheeping inside the egg a couple of days prior to hatch.

9:13 fitzwilliam: QQ have there been studies of travels by wbse wearing transmitters? if so, what found about distances, migrations, etc?

9:16 stephendebus: Fitz - yes there was a study published in corella in 2009. It was a study of foraging behaviour. There's not really any official research being done at the moment. It's also a time consuming exercise

9:17 stephendebus: Any more questions?

9:17 stereomagazine: Do WBSE's hunt only in seawater or will they hunt in fresh if necessary

9:18 stephendebus: They live and breed in freshwater. MOre abundant on the coast.

9:18 priscillash: QQ if a WBSE were introduced to NA would it survive

9:19 stephendebus: Priscilla - That would be inadvisable because there's already a native eagle in the same genus and generally introductions are ecological disasters

:19 priscillash: ty Stephen

9:18 novascotianchatzhhh: if the juvenile wbse is s2 , could his return to the nest may be gonna have to rewrite the "this happens , that happen , ad no never this or that " books

9:20 stephendebus: nova - It has already been mentioned that juvies appear back at the nest at the start of the next breeding season. It adds to our understanding

9:18 Nancyjm: Have genetic studies been done on eagle species to determine taxonomic similarity or distance (or hybridization)? For example, between WBSE and Sanford's?

9:22 stephendebus: Nancyjm - yes Jill Shephard did a genetic study of WBSE over it's global range and found little variation. With Sanfords there's been little genetic comparison and it found that they were genetically very similar. Some people therefor conclude that Sanfords is only a sub-species of WBSE.

9:20 FaithyMD: QQ - with S2 visit to nest - he came to new nest - so doe that mean more focus omn returning to parents as vs hatch nest?

9:23 stephendebus: Faithy - the nests are very close so can't really answer - sometimes adults just build a new nest anyway.

9:24 CraftyC-1: your personal opinion of attaching transmitters to raptors ?

9:25 stephendebus: Crafty - There was a recent review of the effect of transmitters on birds and it generally concluded that it has a negative effect. Some studies have found no adverse effect on raptors.

9:24 feather1: When incubating, how do the parents keep humidity at right level, especially if having fished and wet when returning to incubate?

9:27 stephendebus: Feather - Their feathers are fairly water repellent. Generally they won't go from fishing directly to incubating.

9:27 stephendebus: They just dip their feet in anyway.

9:27 emmTas: Geoof just said that in 2008 he observed the adults "bathing" at the brickpits, getting wet & heading straight back to the chicks

9:28 emmTas: Steve asked me to add that - he's never seen them wet on the nest

9:28 fitzwilliam: QQwould it be possible to get references for foraging study and study on transmitters, maybe posted later?

9:28 emmTas: fitz - I will undertake to get the refs

9:28 fitzwilliam: thanks, emm

9:29 stephendebus: Fitz - yes it was Jason Wiersma 2009, Emm has a copy.

9:29 andimal23: that will be interesting reading, thanks for sharing that

9:28 ticker07: I have always thought that a backpack on a Raptor would cause problems in a conflict with intruder

9:30 stephendebus: Ticker - It could do, because sometimes they are fixed to tail feathers.

9:29 FaithyMD: this has been facinating - ty Stepen for coming in to speak with us

9:30 sherlock1: thank you Dr. Debus!!

9:30 aussie-birdlover: Well as it is 9.30am we should close the chat now

9:30 JudyRameior: Hi folks, TY Stephen. Just caught the end.

9:30 jocast1: Thank you Dr. Debus, it has been a wonderful learning experience

9:30 kellirooney: Heartfelt thanks, Dr. Debus, for sharing your experience and knowledge with us all <3

9:30 debjs: Thank you very much for sharing your knowledge with us!

9:30 emmTas: I will add the full ref to the chat transcript for you

9:30 aussie-birdlover: Thank you very much Dr Debus for a most interesting and informative chat session.

9:30 sweetsue13-1: we will have a transcript of chat available soon

9:30 fitzwilliam: We appreciate your sharing your time and expertise with us, Dr. Debus

9:30 JudyRameior: How to find full discussion, Emm?

9:30 priscillash: TY for your time Stephen!

9:30 shuff1: Thank you Dr Debus. And thanks for all of your research. Excellent session and thanks for sharing with us.

9:31 jeanette99: i just watched, was fascinating thank you DR :)

9:31 stephendebus: Ok - thanks everybody

9:31 andimal23: thank you Dr. Debus, chat transcripts will be posted on our website forums and on the facebook pages

9:31 emmTas: transcript will be available later when we have a chance to compile Q &As

9:31 priscillash: ty andi

9:31 JudyRameior: TY for directions, Andimal. :)

9:31 emmTas: Steve can come back this afternoon at 2.30pm for a further 30 mins

9:31 fitzwilliam: emm, it'd be great if you could put the references onto the transcript when it's posted.

9:31 perchporch: we are observers with an egle yey for your research Dr. Debus thanks

9:32 FaithyMD: there will be a a doc relatinging all info available in FB and on forum - soon - for those who may have missed somme

9:32 andimal23: that will be 12:30 AM eastern time for North America

9:32 emmTas: will do - going into Steve's course at 10am

9:32 aussie-birdlover: As it is a shorter sessoin this afternoon please give him a chance to answer one question before asking another

9:32 mimipa: Very informative. Thank you, Dr.Debus.

9:32 gr8lakes: Ticker did you get Dr. Debus response to your post He agreed with yyou

9:32 JudyRameior: LOL, Andi, I'll prolly B up! (east USA-er here!)

9:32 feather1: thank you Dr Debus