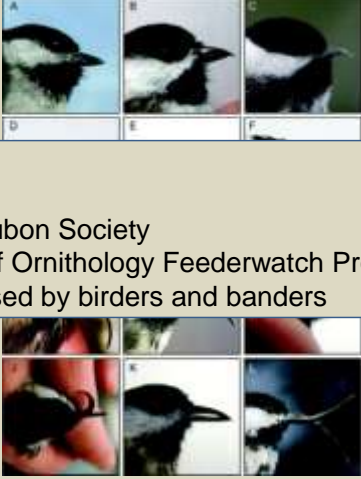



Slide 1







- Colleagues
- Biologists
- National Audubon Society
- Cornell Lab of Ornithology Feederwatch Program
- Listservers used by birders and banders

Handel *et al.* 2010. Epizootic of beak deformities in Alaska. *The Auk*. 127:882-898.

Slide 4



These people are fantastic at species identification

The slide features a light beige background with the word "Mapping" centered at the top. In the upper left corner, there are two overlapping blue circles; the top one contains the word "Who" and the bottom one contains "Where". Below these are three logos: the Taronga Conservation Society Australia logo (top right), the Australian Registry of Wildlife Health logo (middle right), and the Atlas of Living Australia logo (bottom left). The Atlas of Living Australia logo includes a stylized orange map of Australia on a dark square background and the text "ATLAS OF LIVING AUSTRALIA" with the tagline "sharing biodiversity knowledge" below it.

there are mapping facilities for species available through many of the state based environment organisations

Slide 6



Australian Citizen Science Assoc is part of Atlas of Living Australia



Slide 8





When

- When is illness being detected?
- When did the insult occur?
- Different scales of time (be as specific as possible):
  - Time of day/week
  - Time of year/season
  - Which years
  - Coincidence with other events



Slide 11

**When**

Summary of epidemiological findings of kangaroos found to have green discoloration of the grey matter at post mortem examination

Year	Month	Location	Animals	Clinical signs	Observer
1984	April–November	Kangaroo Island, SA	13 WGK, 8 TW	Neurological abnormalities	Dr Peter Phillips
1998	June, July	Seymour, VIC	EGK	Jumping erratically, circling, crashing into things and falling over	Dr John Dalziel, Dr Malcom Lancaster
2001	July	Seymour	EGK	Hyperexcitability, ataxia	Dr John Dalziel, Dr Malcom Lancaster
2011	September	Seymour	EGK	Hyperexcitability, ataxia	Present study
2012	January	Dartmoor, VIC	EGK	Hyperexcitability, ataxia	Present study
2013	June	Axedale, VIC	9 EGK	Hyperexcitability, ataxia	Present study

WGK, western grey kangaroos; EGK, eastern grey kangaroos; TW, Tamar wallabies.

Australian Veterinary Journal  
Volume 92, Issue 12, pages 504-508, 26 NOV 2014 DOI: 10.1111/avj.12272

Does a disease exist if it's not in the literature? Diseases also emerge into our knowledge base

Slide 12

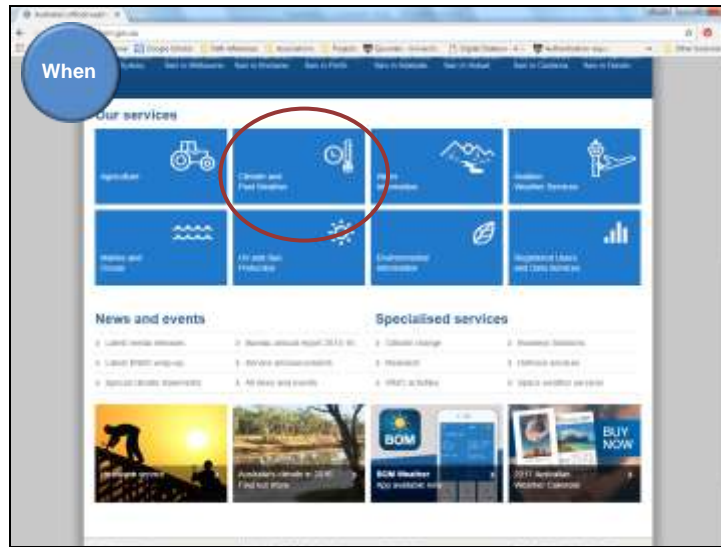
When <http://www.bom.gov.au/>



The screenshot shows the Australian Bureau of Meteorology website. At the top, there is a navigation bar with various links. Below this, a yellow banner displays "Warnings current" with a warning icon and a "Warnings overview" link. The main content area features a satellite map of Australia on the left and a "next" weather forecast graphic on the right. Below the map and graphic, a section titled "Weather for Wednesday 11 January" provides a table of weather data for eight cities: Sydney, Melbourne, Brisbane, Perth, Adelaide, Hobart, Canberra, and Darwin. Each city entry includes the current temperature, a weather icon, and the maximum temperature.

City	Temp	Icon	Max
Sydney	31.9°	☀️	38°
Melbourne	23.6°	☁️	23°
Brisbane	31.9°	☀️	34°
Perth	32.2°	☀️	35°
Adelaide	25.7°	☁️	28°
Hobart	20.9°	☁️	21°
Canberra	34.3°	☀️	35°
Darwin	28.2°	☀️	32°

Slide 13




The image shows a screenshot of a web browser displaying a climate-related website. A blue circular callout with the word "When" is positioned in the upper left corner. The main content area is titled "Climate and past weather" and features a grid of various climate-related graphics and text. A red circle highlights a specific data visualization in the middle-right section of the page, which appears to be a bar chart or line graph showing trends over time. The website's interface includes a navigation menu on the left and a search bar at the top.

When



The screenshot displays the Climate Data Online (CDO) website interface. A blue circular callout with the word "When" is positioned in the top-left corner. The main content area features a map of Australia with various climate data overlays, including a color-coded temperature distribution. The interface includes a navigation menu on the left, a search bar at the top, and a "Climate Data Online" header. The map is titled "Select a location" and "Select a data type". The map shows a color-coded distribution of data across Australia, with warmer colors (red/orange) in the north and cooler colors (green/blue) in the south. The interface also includes a "Date" selector and a "Data type" dropdown menu.



What

- Vet/Pathologist's realm
- Outline the case definition – clinical signs, pathology
- Sample collection
  - Communication with collectors

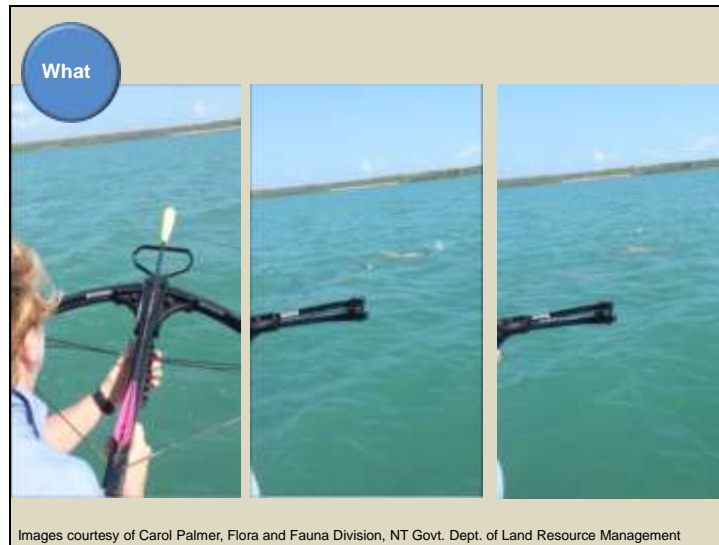


What



Images courtesy of Carol Palmer, Flora and Fauna Division, NT Govt. Dept. of Land Resource Management

Slide 18



However, in 2014, another attempt to biopsy, using this impressive looking cross bow, was successful in collecting affected skin.

What




C. Palmer

Finn Larsen [fl@aqua.dtu.dk](mailto:fl@aqua.dtu.dk)

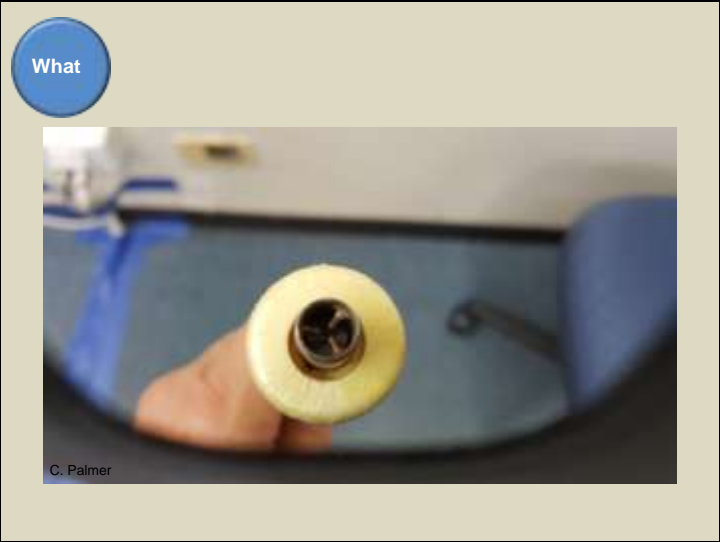
The image shows a yellow, tapered, cone-shaped object, possibly a probe or a specialized tool, held by a hand. The object has a black handle and a metal tip. The background is a plain, light-colored surface.

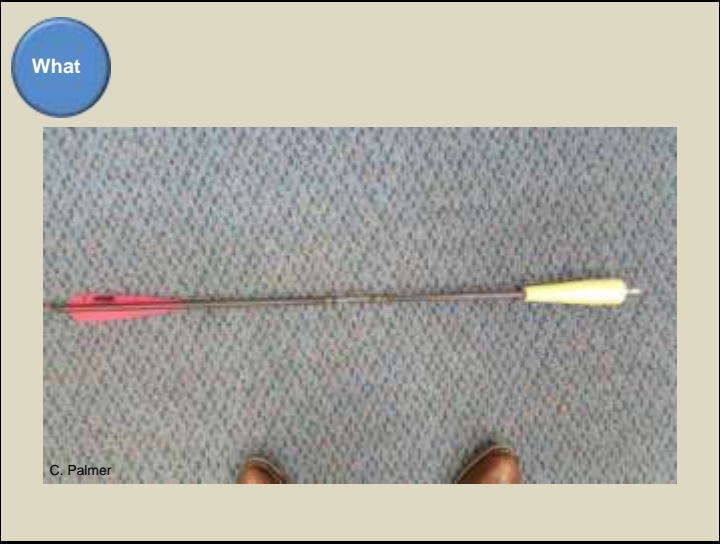
What



C. Palmer

The image shows a yellow, tapered, conical object, possibly a tool or component, lying on a blue patterned surface. The object is oriented horizontally and has a smooth, slightly curved surface. The background is a blue fabric with a repeating pattern of small, dark, diamond-shaped motifs. The entire image is framed by a thin black border.





Why

- What is the immediate cause of the outbreak (aetiology)?



Why



Haematology of Australian Mammals (2004)  
Phillip Clark

Australian Mammals: Biology and Captive Management (2007)  
Stephen Jackson

Medicine of Australian Mammals (2008)  
Edited by: Larry Vogelneust (Taronga Zoo) & Rupert Woods (Wildlife Health Australia)

Pathology of Australian Native Wildlife (2009)  
Philip Ladds

CSIRO PUBLISHING



Why



Wildlife Health  
Australia



**TARONGA**  
CONSERVATION SOCIETY AUSTRALIA™  
**Australian Registry  
of Wildlife Health**

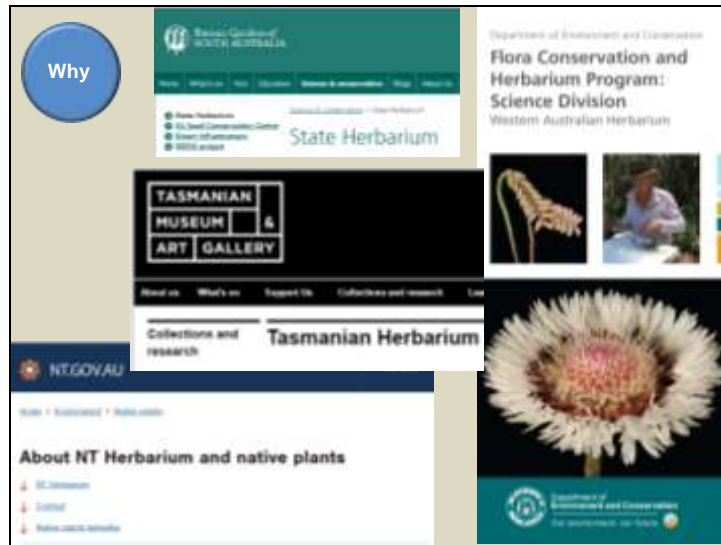
**AAPSP Extranet**  
You are not logged in.

Username

Password

Log In

- AAPSP Digital Slide Server
- Diagnostic Exercises
- Professional Development
- Proficiency Testing – Histopathology
- Toxicology for Australian Veterinarians**
- Upcoming Workshops and Events
- Useful Links
- Veterinary Pathology Reports
- What's New





Slide 28



Just like we want specimens submitted appropriately, so do the plant folks.

The image is a screenshot of the Australian Government website, specifically the 'Our Services' page. A blue circular callout with the word 'Why' is positioned in the top left corner. The website header includes the Australian Government logo and navigation links. The main content area is titled 'Our Services' and features a section for 'Size of Radiation Meters'. This section includes a sub-header 'Size of Radiation Meters', a brief introduction, and three distinct meter types: 'Rogers' Field Meter', 'Rogers' Field Meter Plus', and 'Rogers' Field Meter Plus'. Each meter type is accompanied by a small image of the device and a brief description of its features and capabilities. The page also includes a sidebar with navigation options and a footer with contact information.



Why



The screenshot shows the TOXNET website's HSCDB (Hazardous Substance Data Bank) interface. At the top, there is a search bar with the text "e.g. benzene, industrial strength" and a "Search" button. Below the search bar, there are several sections: "About HSCDB" which describes the database's purpose, "Did you know?" with a list of TOXNET databases, and a "Support" section with contact information. A blue circular callout with the word "Why" is positioned in the upper left corner of the screenshot. A white text box with a black border is overlaid on the middle of the screenshot, containing the URL "www.toxnet.nlm.nih.gov/newtoxnet/hscdb.htm".

[www.toxnet.nlm.nih.gov/newtoxnet/hscdb.htm](http://www.toxnet.nlm.nih.gov/newtoxnet/hscdb.htm)

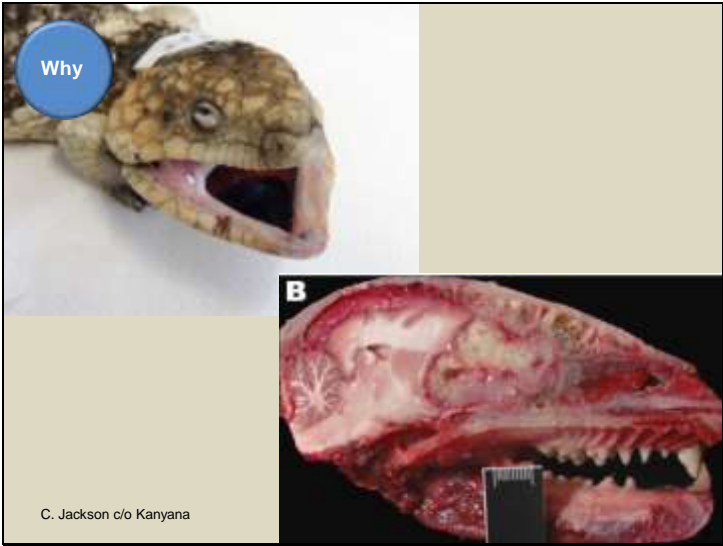
The screenshot shows the Australian Government Department of Agriculture and Water Resources website. The header includes the department's name and a search bar. A navigation menu lists various areas: Training, Exporting, Research, Handling in works, Agriculture, Training and food, Trade and market access, ADAS's animal and resources, Water, safety and resources, Forestry, Fisheries, and About us. The main content area features a large image of a rural landscape with cows. A text box is overlaid on the page, containing the following information:

- Lists of diagnostic procedures (current and those in development)
- contact details for reference laboratories

<http://www.agriculture.gov.au/animal/health/laboratories>

The website content below the image includes a sidebar with a 'Home' button and a 'Animal Health' section. The 'Animal Health' section is expanded, showing a list of links: 'Animal Health Strategy', 'Diagnostic procedures', 'Reference laboratories', and 'Laboratories'. The 'Animal Health Strategy' link is highlighted, and a box is drawn around the text: 'List of diagnostic procedures (current and those in development)'. Below this, the 'National Laboratory Task Group' section is visible, with the text: 'The Animal Health Committee (AHC) National Laboratory Task Group provides technical advice to the AHC on behalf of animal health laboratory users. With administrative support from our department, the task group coordinates a number of essential laboratory functions agreed by AHC to support Australia's national animal health system.'






C. Jackson c/o Kanyana

**Why** Next Generation Sequencing

<b>Pros</b>	<b>Cons</b>
Don't need to know what the target is	Expensive (coming down)
Hugely powerful way to interrogate a sample	Requirement for computing power
Bacteria, viruses, fungi, parasites...anything!	Some bioinformatics understanding required
	Host DNA can mask some pathogens

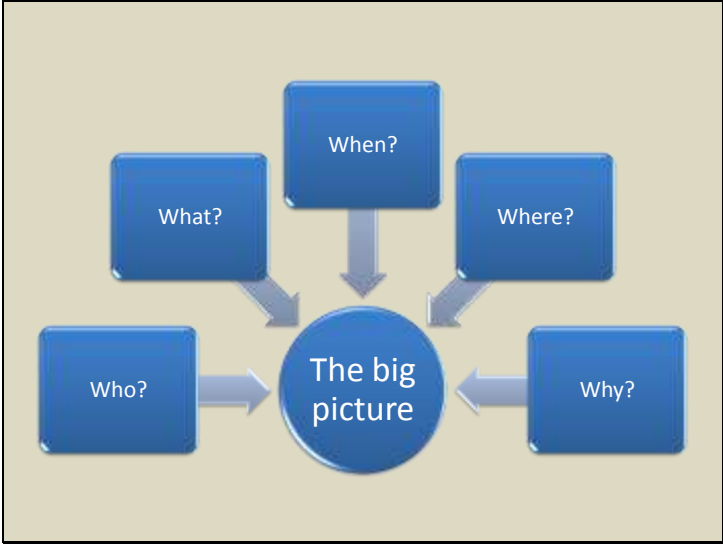


Slide credit: Mark O'Dea & Bethany Jackson

Why

- We (UC Davis in collaboration with NIH and UCSF) have, at this point, an algorithm using molecular biology (deg PCR, deep sequencing, RCA etc) to find viruses associated with tumors, so if anyone there has a candidate tumor they want us to work up, let us know!

Patricia Pesavento  
papesavento@ucdavis.edu



Slide 37



Dr. Richard Rock of the Royal Veterinary College was on hand. By his report, the death rate among animals that became sick was 100% and they died within hours of initial signs. He also explained that epidemiologically the speed of the outbreak was not consistent with an infectious disease which should take time to pass through a herd.

# Looking forward, rather than back

## Health Risk Analysis in Wild Animal Translocations

<b>Introduction to Risk Analysis</b> <b>Guidelines for Risk Analysts</b> Step 1: Translocation Plan Step 2: Identification of Health Hazards Step 3: Assessment of Health Hazards Step 4: Overall Health Risk Step 5: Additional Hazards and Risks Step 6: Reduction of Risk Health Risk Analysis and Decision Making Evaluation of Risk Analysis Operative and Health Screening Protocols for Wildlife (HSP2) Source Information Links	<b>Introduction to Risk Health Analysis</b> <b>Purpose</b> This document gives step-by-step procedural guidelines to analyze health and related risks associated with movement of wild animals from one geographic location to another. The primary purpose of this document is to provide guidelines for health risk analysis by impacting actions in the laboratory movement of wild animals, the procedure outlined can be applied equally well to all wild animal translocations. <b>Documentation</b> The approach taken follows the OIE International Health Code, Section 1.1, and the OIE Manual on the Risk Assessment Frameworks (document of the OIE/FAO Ministry of Agriculture, Food and Rural Affairs. Technical terms associated with risk analysis used in this document are defined in the OIE International Health Code, Section 1.4. This document was prepared by the Canadian Cooperative Wildlife Health Centre and the Working Group of OIE. <b>Introduction</b> Wild animals are moved from one place to another for a variety of reasons. When they are captured in the wild for conservation purposes, health risks associated with transport are: 1. That the animals will carry new diseases to the destination ecosystem. 2. That the animals being moved will not be harmed by their new environment.
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