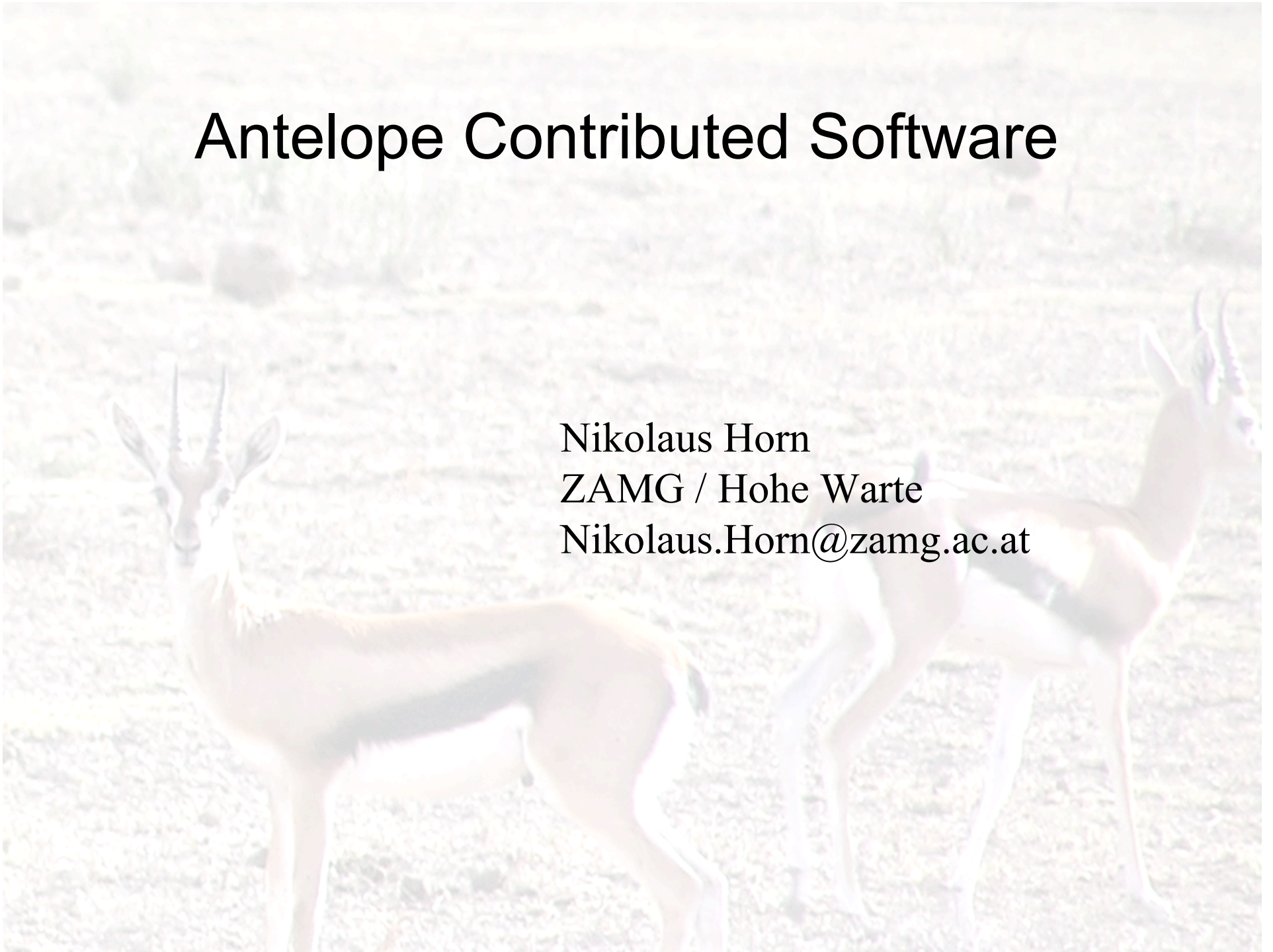


# Antelope Contributed Software

Nikolaus Horn  
ZAMG / Hohe Warte  
Nikolaus.Horn@zamg.ac.at



# Availability

Homepage

<http://www.indiana.edu/~aug/>

CVS

<mailto:pavlis@indiana.edu>

webinterface to CVS

<http://quakeinfo.geology.indiana.edu/cgi-bin/cvsweb.cgi/>

tarball

<ftp://seismo.geology.indiana.edu/pub/aug/>

# New in 4.7

•acro	Kent Lindquist	interact with acronyms database
•update_data_availability	Nikolaus Horn	update a database with data-retrn rates
•data_availability	Nikolaus Horn	query the database and display a report
•db2ampmagpf	Nikolaus Horn	helper for dbampmag/orbampmag to create paramterfiles based on dbmaster
•db2loon	Kent Lindquist	format converter
•db2ptolemy	Tobin Fricke	export database view to ptolemy
•dbplotpicks	Nikolaus Horn	display of picks and waveforms, plottable
•dbe_dbplotpicks	Nikolaus Horn	helper for dbplotpicks, allows running it from dbe
•fileaction	Nikolaus Horn	GUI to select possible actions for a file

# New in 4.7 (cont')

- make\_dbrecenteqs\_map      Kent Lindquist      create maps for usage with dbevents/dbrecenteqs
- dbevents\_calc\_mapparams      Kent Lindquist      utility for make\_dbrecenteqs\_map
- dbinbox      Kent Lindquist      utility to manage mails
- dbnew2orb      Nikolaus Horn      send changes in databases to an orb
- dbserver      Tobin Fricke      daemon to serve database contents
- guralplocate      Gary Pavlis      estimate position from Guralp log-files
- init\_training      Kent Lindquist      setup databases for training-situations

# New in 4.7 (cont')

- |                       |                     |   |
|-----------------------|---------------------|---|
| •make_shakemap_qtm    | Kent Lindquist      | utility to use cgrid files with USGS ShakeMap program |
| •mseed2seedpkt        | Chad Trabant        | reformat mseed packets                                |
| •nagios_check_orbstat | Steve Foley         | NAGIOS plugin   |
| •q330gpslocate        | Gary Pavlis<br>logs | estimate location from Quanterra q330                 |
| •retime               | Nikolaus Horn       | utility to specify times                              |
| •rtbackup_wfdisc      | Kent Lindquist      | copy waveforms to another database                    |
| •rtp2orb              | Frank Vernon        | data acquisition from rfttec server                   |

# New in 4.8

- templates
- rtimbank – webinterface for image database
- wfplotter – php library for waveform plotting
- php/lib/ - stanotes, rgb
- dbscanmail - cleanup mail database
- dbwebproject – Antelope based Content Management System
- nagios\_check\_q330\_ping – Nagios module to ping q330
- ryo2orb - acquisition module for RTD gps data in RYO format
- dbfix\_phase - phase renaming

# grepsrc

To learn how a certain function can be used, ***grepsrc*** is **the** essential tool

options:

- c: c
- C:c++
- p: perl
- t: tcl/tk
- h: header files
- T: text files
- m: man-pages
- M: makefiles
- w: all matching, not just word-matching
- i: case insensitive

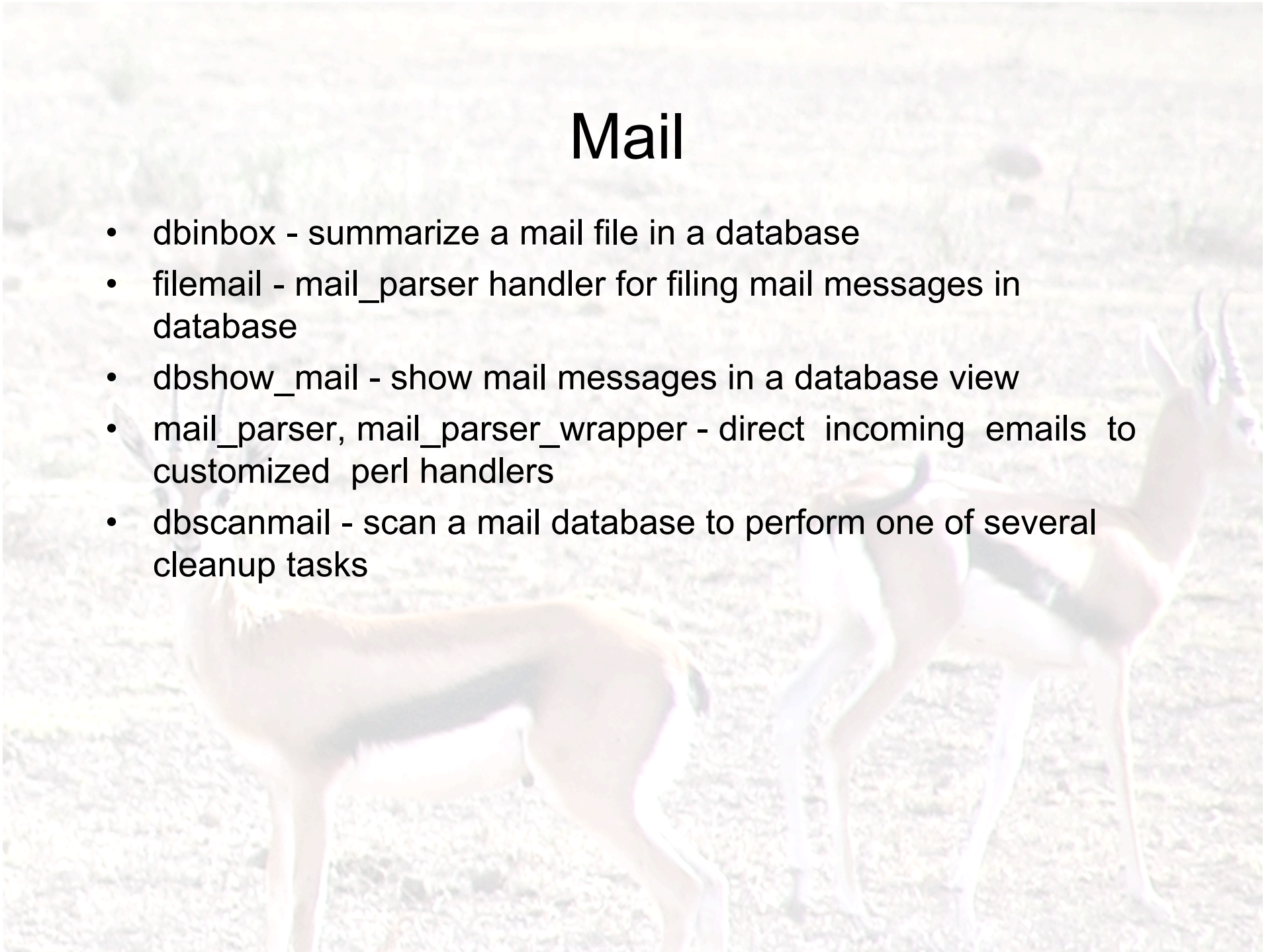
# Existing Software

- Antelope
  - \$antelope/bin
  - \$antelope/data/perl
  - \$antelope/data/tcl
  - \$antelope/example
  - \$antelope/matlab
- Contrib
  - database tools
  - data acquisition / data exchange
  - processing
  - location
  - helpers
  - visualization / webstuff
  - many more



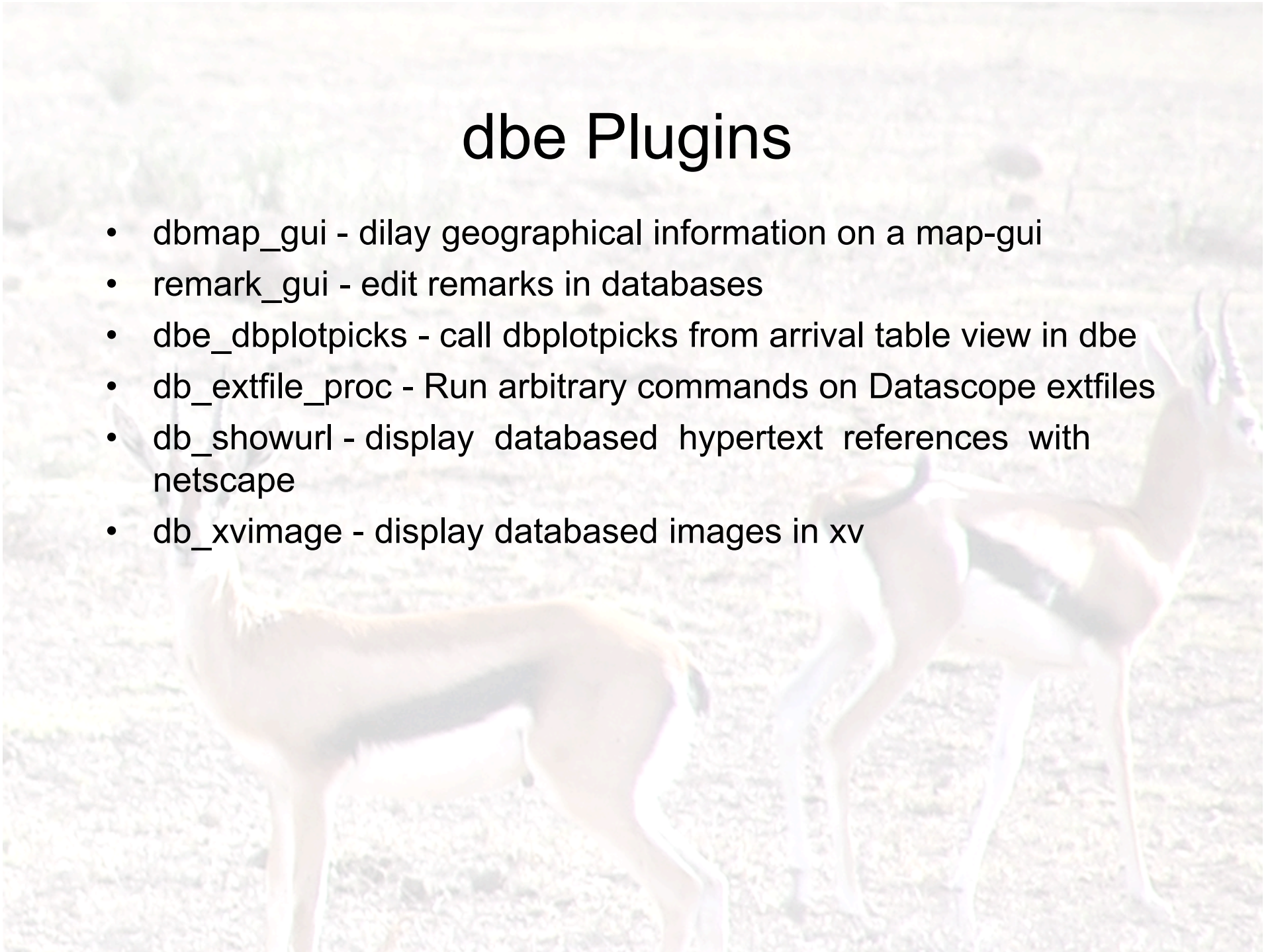
# Mail

- `dbinbox` - summarize a mail file in a database
- `filemail` - `mail_parser` handler for filing mail messages in database
- `dbshow_mail` - show mail messages in a database view
- `mail_parser`, `mail_parser_wrapper` - direct incoming emails to customized perl handlers
- `dbscanmail` - scan a mail database to perform one of several cleanup tasks



# dbe Plugins

- `dbmap_gui` - display geographical information on a map-gui
- `remark_gui` - edit remarks in databases
- `dbe_dbplotpicks` - call `dbplotpicks` from arrival table view in `dbe`
- `db_extfile_proc` - Run arbitrary commands on Datascope extfiles
- `db_showurl` - display databased hypertext references with netscape
- `db_xvimage` - display databased images in `xv`



# Import/Export (rt)

- rddas - read data from RefTek DAS to orb
- rtp2orb - Import data from a RefTek RTPD data server into an Antelope ORB
- ipd - seismic data input daemon for REFTEXT instruments
- ipd2 - seismic data input daemon for REFTEXT instruments
- ryo2orb - import RYO-format real-time GPS data from an RTD server to an orbserver
- adsend2orb - Take Earthworm analog data from internet and put on ORB
- b3s2orb - read B3S2 data to orb
- dmx2orb - Convert PC-SUDS .dmx file into orb packets
- guralp2orb - Import Guralp data into an Antelope orb
- ryo2orb - acquisition module for RTD gps data in RYO format

# Import/Export (rt)

- slink2orb - SeedLink to Antelope ORB module
- mseed2seedpkt - Create SEED type ORB packets from ORB packets that contain Mini-SEED records
- adsend2orb - Take Earthworm analog data from internet and put on ORB
- ew2orb - Import waveform data from Earthworm into an orb
- orb2ew - module to export waveform data from an Antelope ORB to an Earthworm system
- eworm2orb - module to take earthworm waveform-data packets and put them onto an Antelope ORB
- orb2eworm - module to export waveform data from an Antelope ORB to an Earthworm system
- ida2orb - import data from an IDA hub to a Datascope ORB
- liss2orb - read data in LISS format

# Import/Export (db)

- db2neic - submit arrival and hypocenter information to NEIC
- db2pgc - submit arrival and hypocenter information to PGC in Loon format
- db2seggy - conversion from css3.0 traces to seggy disk image
- db2loon - Create Loon-pickfile(s) from database
- finger\_quake - create a "finger quake" bulletin
- db2xml - convert a database view to XML
- db2ptolemy - convert a database view to a Ptolemy II expression
- Xphase2db - Save Xphase pickfile to an arrival table
- aah2db - Convert non-XDR AH files to database
- gnis2db - convert GNIS feature-name files to database

# Import/Export (db)

- pick2db - convert hypoellipse pickfile(s) to datascope css3.0 format
- reb2db - reformat Reviewed Event Bulletins to CSS3.0 database format
- ref2db - convert data in REFTEK format to css3.0
- scec2db - retrieval and conversion of SCEC bulletin
- segy2css - convert data in PASSCAL SEG Y format to CSS format

# Datalogger Utilities

- sendMRC - send mass re-centerring (MRC) command to DAS
- ucp - uucp status inquiry and job control
- ucp2 - User Control Pannel
- dccmd - send commands to DAS/DC
- aalarm - alarm messanger
- guralplocate - estimates station location from guralp digitizer log file
- q330gpslocate - estimates station location from Q330 log file
- par2db - create database with GPS site coordinates and DC/DAS status parameters from ORB (REFTEK)
- k2mon2 - monitor Kinematics digitizers
- automrc - automatically send mass re-centerring (MRC) command to a UCSD REFTEK DAS
- mrc - automatically send mass re-centerring (MRC) command to a DAS
- reftek\_dbtiming - builds timing table for reftek data loggers

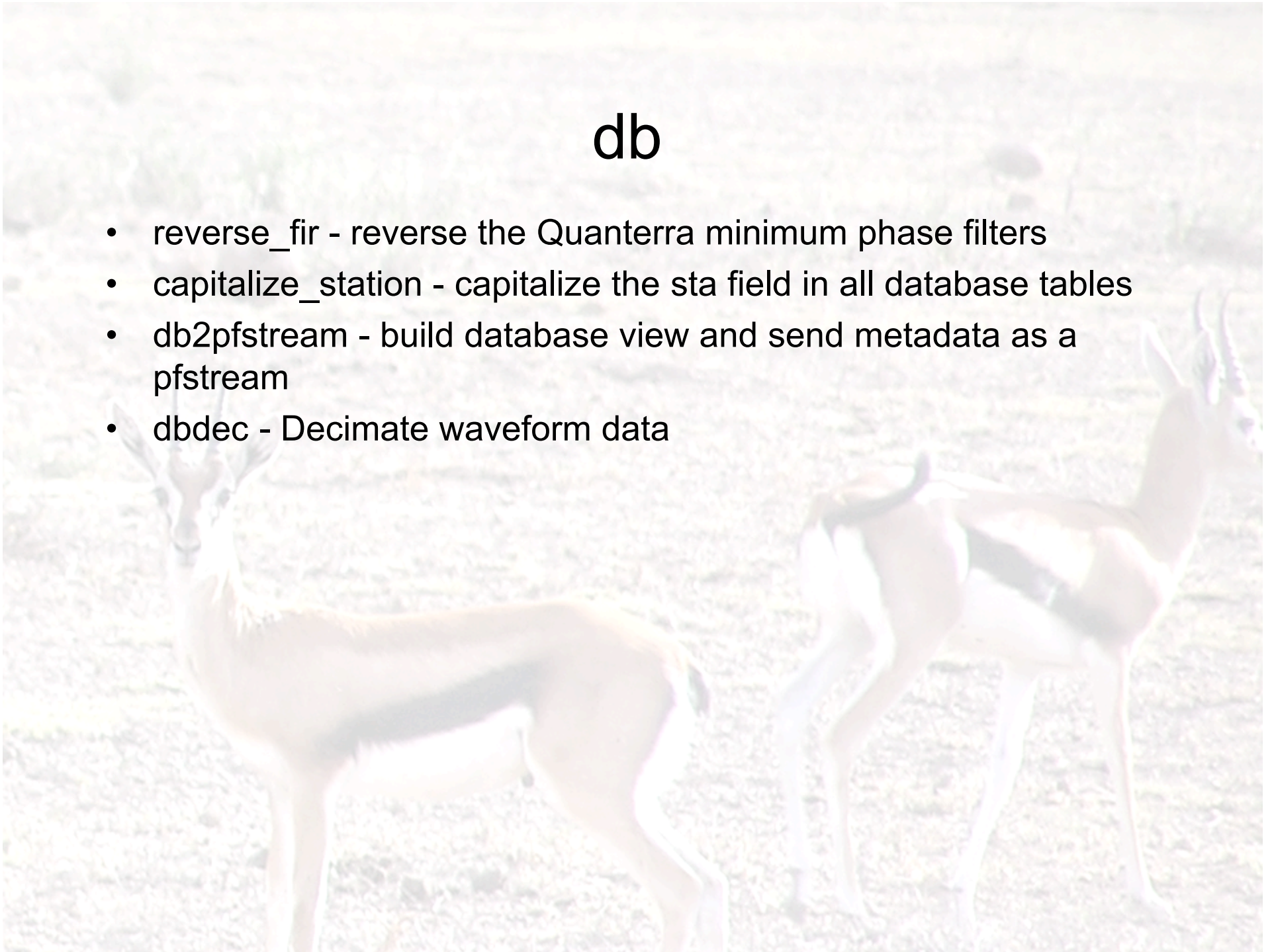
# Archiving

- `cleanup_dbdir` - remove waveforms left over by previous runs of `rtdbclean`
- `make_archive_dblinks` - make day-volume links to archive database
- `remove_old_archive_waveforms` - remove old days of archive waveforms
- `split_archive_database` - split out old days from an `rt1.0` archive waveform database
- `rtbackup_wfdisc` - prototype script to copy waveforms from real-time database to archive
- `db2sync` - create a DCC-DMC Synchronization file of the data holdings in a Datascope database.
- `update_data_availability` - update data availability rates
- `data_availability` - update data availability rates



# db

- reverse\_fir - reverse the Quanterra minimum phase filters
- capitalize\_station - capitalize the sta field in all database tables
- db2pfstream - build database view and send metadata as a pfstream
- dbdec - Decimate waveform data



# db

- `dbdescribe` - describe the format of a Datascope database
- `dbfix_calib` - Assign calib values from calibration table to `wfdisc`
- `add_staname` - fill in the `staname` field of a site table
- `setdne` - sets `dnorth` and `deast` fields in a `css3.0` database site table
- `set_pde_orids` - set the format of `orids` for `pde` databases as in `pde2origin`
- `dbtc`, `correcdt` - perform waveform and database time corrections
- `translate_stachan_names` - look for stations not in translation database
- `tabulate_missed_stations` - look for stations not in translation databas

# db

- `assoc_rayleigh` - associates rayleigh wave picks to origins
- `dbassoc_arrival_fold` - run `dbassoc_arrival` and fold the assocs into hypocenter database
- `dbadd_unassoc` - Add unassociated events from a catalog to a real-time database
- `extrd` - extract specified segment of the css data
- `dbfix_phase` - phase renaming
- `dbt2orb` - read Datascope database rows from a database and post them to an ORB
- `orbcp` - orb copy program - another `orb2orb`
- `dbnew2orb` - transfer modified database rows to an orbserver
- `inwhichpolygons` - search a database with polygons for point inclusion
- `regions2polygon` - convert polygon information from places1.2 to a (new) database in polygon1.2 schema

# Information

- orblookup - cgi programs to provide orb status
- orblook - cgi programs to provide orb status
- orblast - list an orb contents - another orbstat
- eqrespond - Respond to an earthquake
- calldown\_notification\_tool - GUI interface for reporting felt information
- eqcellphone\_release - email to cell phones information-release reports of earthquakes from database
- eqrelease\_distributor - distribute information for Earthquake release notices
- felt\_report\_tool - GUI interface for reporting felt information
- nagios\_check\_orbstat - a Nagios plugin to monitor values in pforbstat packets.
- nagios\_check\_q330\_ping – Nagios module to ping q330
- orbstatj - java version of ORB status display

# Information

- orb\_quake\_cell - email to cell phones reports of earthquakes from origin rows on orb
- orb\_quake\_email - email reports of earthquakes from origin rows on orb
- circuit\_check - launch orbmonrtd for a given subnetwork
- dbserver - server engine for Datascope databases
- dbproject\_covariance - compute confidence-ellipse from covariance matrix
- project\_ellipse - project a 3-D error ellipse onto the surface
- dbschema2prolog - wrap a Datascope database schema into Prolog syntax
- pfstream2db - extracts attributes from a pfstream to database tables
- orbpf2db - generic transfer of parameter-files to database
- pforbstat - routines to return parameter files with orb status
- orbptrigger - ORB packet trigger
- pf2xml - Convert a parameter-file to XML
- dbschema2xml - Write a Datascope schema definition in XML syntax

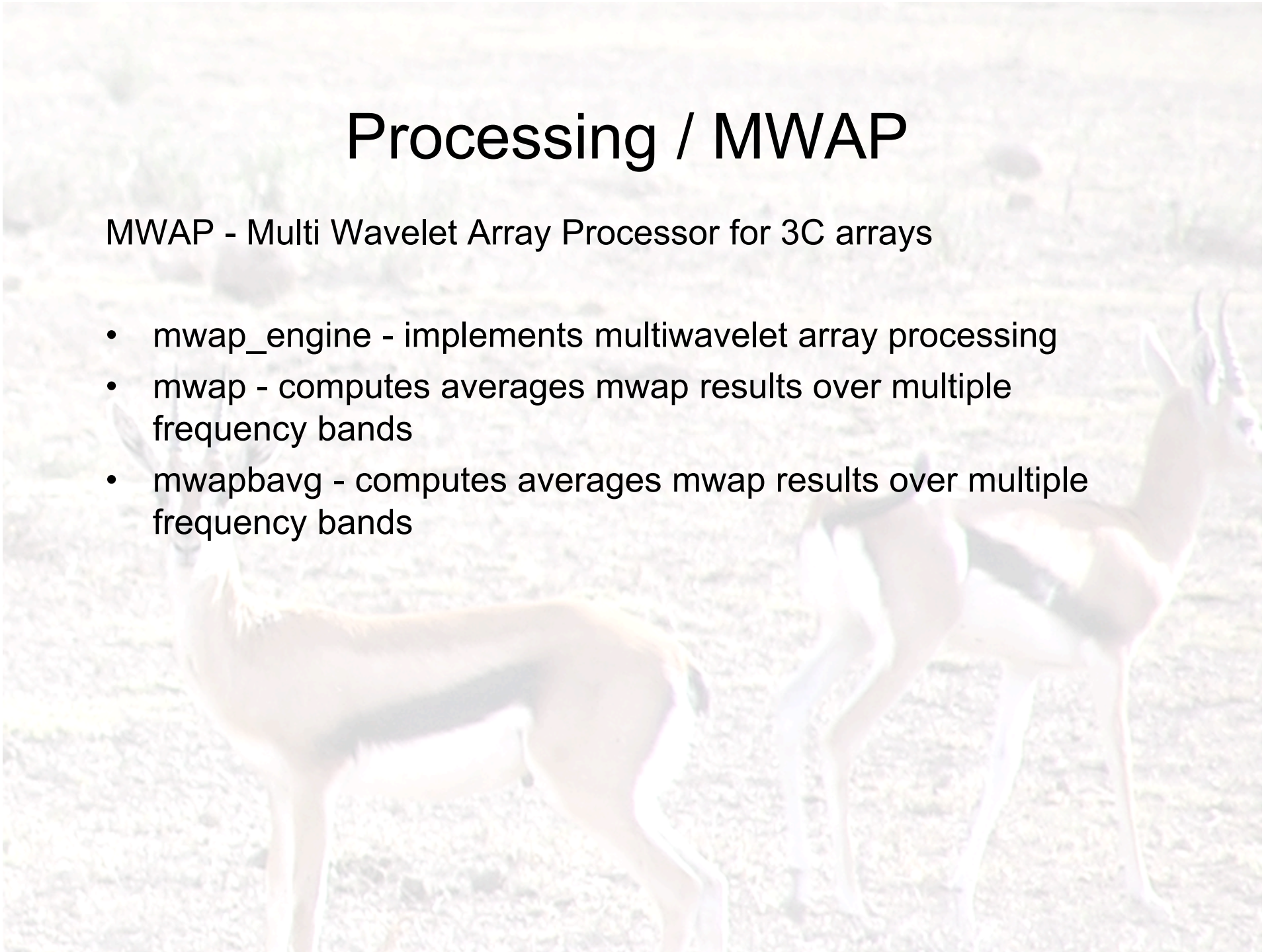
# Processing

- dbresample - convert all data in an event segmented database to common sample rate
- trrotd - rotates, detrends, and decimates a 3-component record set
- trstack - stacks selected traces in a css3.0 database
- dbdepest - estimates depth to Moho from a receiver function
- dbmwspec - computes multitaper spectral estimates for selected phases
- dbrfcn - calculates receiver functions via frequency-domain deconvolution (css3.0)
- dbtimerf - calculates receiver functions via time-domain deconvolution (css3.0)
- dbshearsplit\_compute - correct for shear-wave splitting
- dbshearsplit\_display - display shear-wave splitting

# Processing / MWAP

MWAP - Multi Wavelet Array Processor for 3C arrays

- `mwap_engine` - implements multiwavelet array processing
- `mwap` - computes averages mwap results over multiple frequency bands
- `mwapbavg` - computes averages mwap results over multiple frequency bands



# Location

- sgnloc - command line interface to single event location code
- dbgenloc - dbloc2 interface to genloc library of event location code
- relocate - locates all events in a css3.0 database with genloc
- orbgenloc - orb interface to genloc single event location code
  
- hypotab - companion program to tabcalc travel time calculator
- tabcalc - travel time calculator for 1d, continuous velocity models
- taup\_convert - Uses taup library to produce travel time tables that can be used by genloc location programs

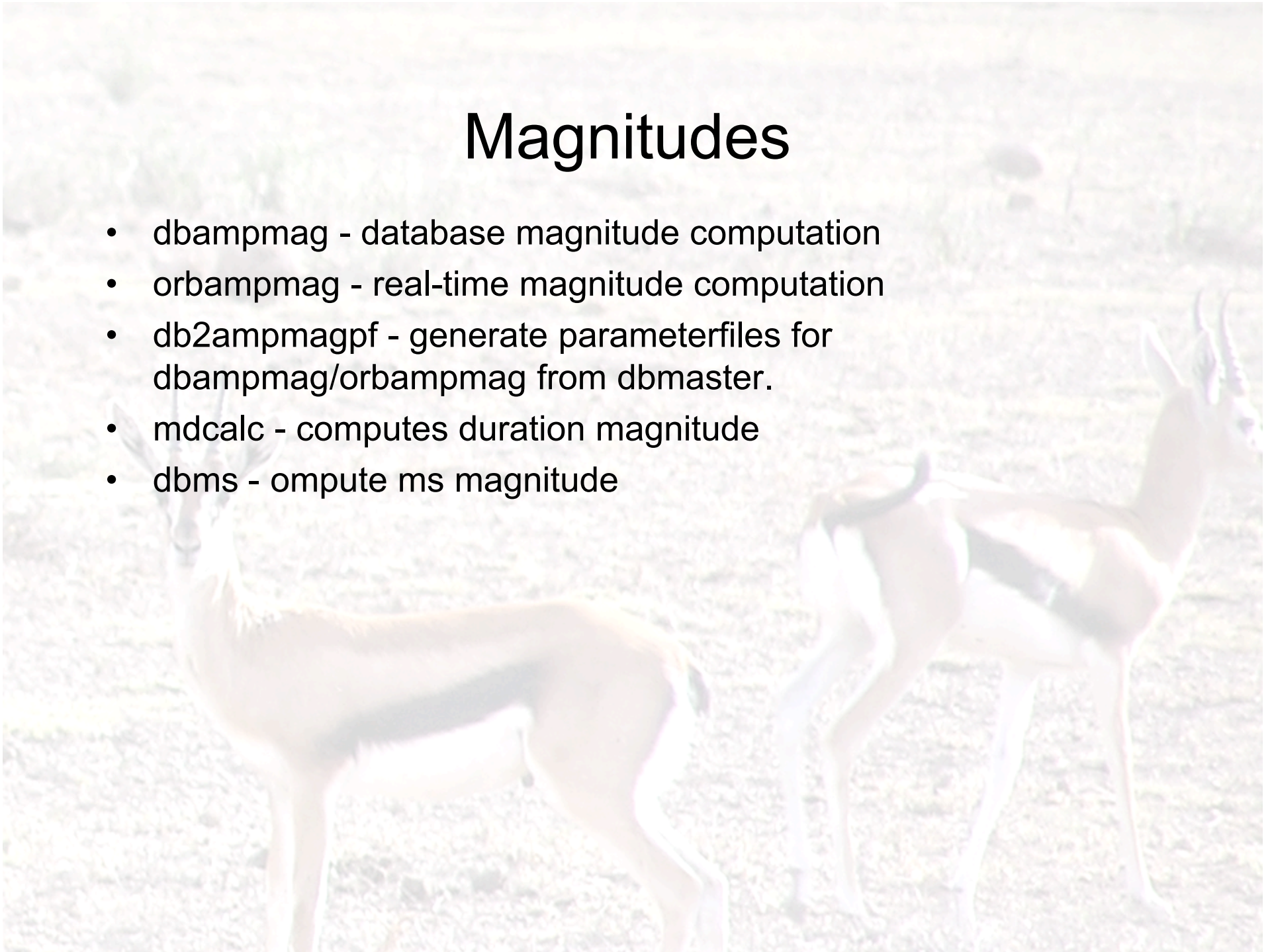
## Progressive Multiple Event Location

- cluster - Process single-character switches with switch clustering
- getopts - Process single-character switches with switch clustering
- dbpmel - database driven implementation of pmel
- pmelavg - average grid-based solutions produced by pmel
- pmelgrid - data driven processing module for PMEL catalog relocation



# Magnitudes

- dbampmag - database magnitude computation
- orbampmag - real-time magnitude computation
- db2ampmagpf - generate parameterfiles for dbampmag/orbampmag from dbmaster.
- mdcalc - computes duration magnitude
- dbms - compute ms magnitude

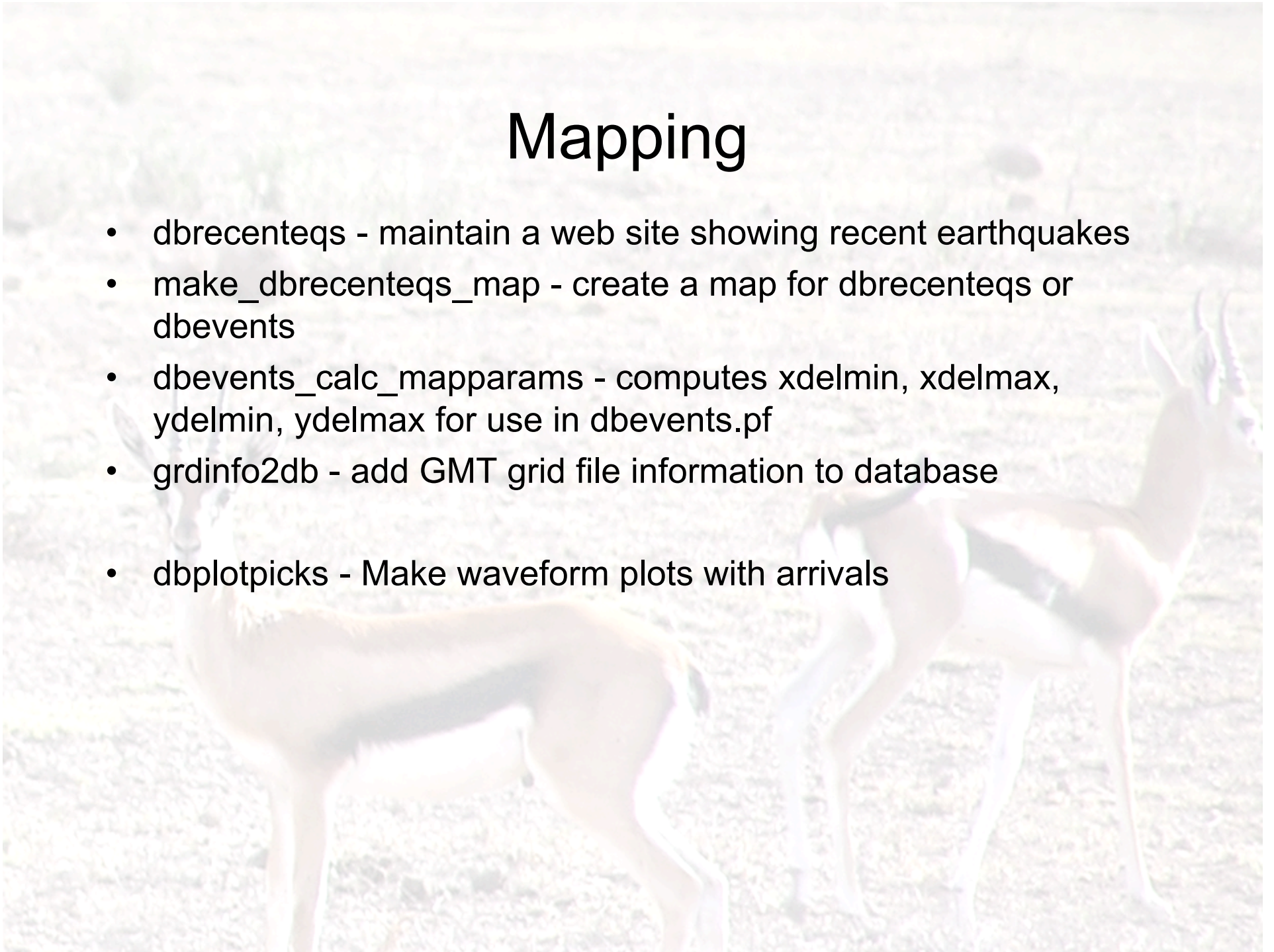


# Shakemaps

- `dbgme` - run `dbgme` for `dbloc2`
- `dbloc_run_dbgme` - run `dbgme` for `dbloc2`
- `shakemapxml2db` - Create database from USGS ShakeMap XML data
- `db2shakemap_xml` - create input for USGS ShakeMap from database
- `grd2cggrid` - convert a GMT grid file to a `cggrid`
- `cggrid_convert` - convert files from one `cggrid` format to another
- `cggrid_probe` - probe a `cggrid` file
- `cggrid_info` - get information on a `cggrid` file
- `shakemapgrid2cggrid` - convert a ShakeMap XYZ grid file to a `cggrid`
- `dbgmtgrid` - perl routines to construct `gmt` grid from database
- `extract_gmtgrid` - construct `gmt` grid file from directory of grid files
- `makegclgrid` - build a `GCLgrid` object and save to database
- `dbgme_show` - Plot a `gme` file from a database
- `make_fake_vs30` - generate a fake `vs30` input file from topography data
- `make_shakemap_qtm` - convert a `cggrid` file into a ShakeMap QTM file

# Mapping

- `dbrecenteqs` - maintain a web site showing recent earthquakes
- `make_dbrecenteqs_map` - create a map for `dbrecenteqs` or `dbevents`
- `dbevents_calc_mapparams` - computes `xdelmin`, `xdelmax`, `ydelmin`, `ydelmax` for use in `dbevents.pf`
- `grdinfo2db` - add GMT grid file information to database
- `dbplotpicks` - Make waveform plots with arrivals



# Workflow

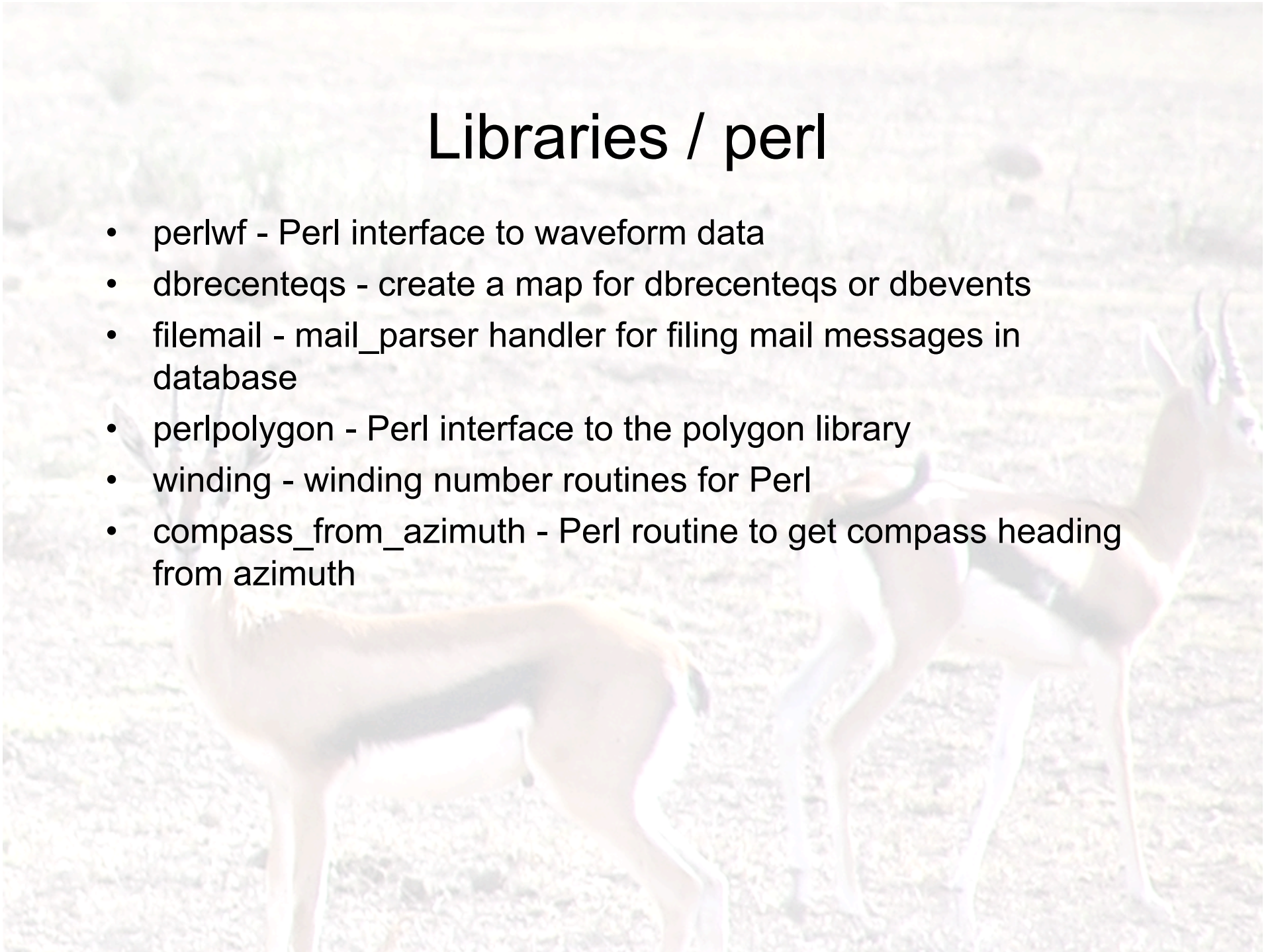
- analysis\_control - database checkout/checkin utility for daily processing
- dbcentral - centralized utility to launch commands on commonly used databases
- init\_training - initialize a database for analyst training
- smartpick - Graphical driver for dbpick
- tkedit\_ml - edit ML station-magnitudes in a TK window

# Utilities

- tkshow\_message - show a message in a TK window
- pfcop - copy antelope parameterfiles
- set\_display - choose opposing X windows screen for display
- reltime - print times relative to another time
- fileaction - GUI to run action from a list
- acro - interact with acronym database
- manage\_paymentdb - GUI to track activity for a database of payments
- matdoc - utilities to make documentation for Matlab Antelope Toolbox
- make\_contrib\_srcdistro - Package Antelope contributed-code for export
- cvs\_activitymail - CVS activity notification.
- templates

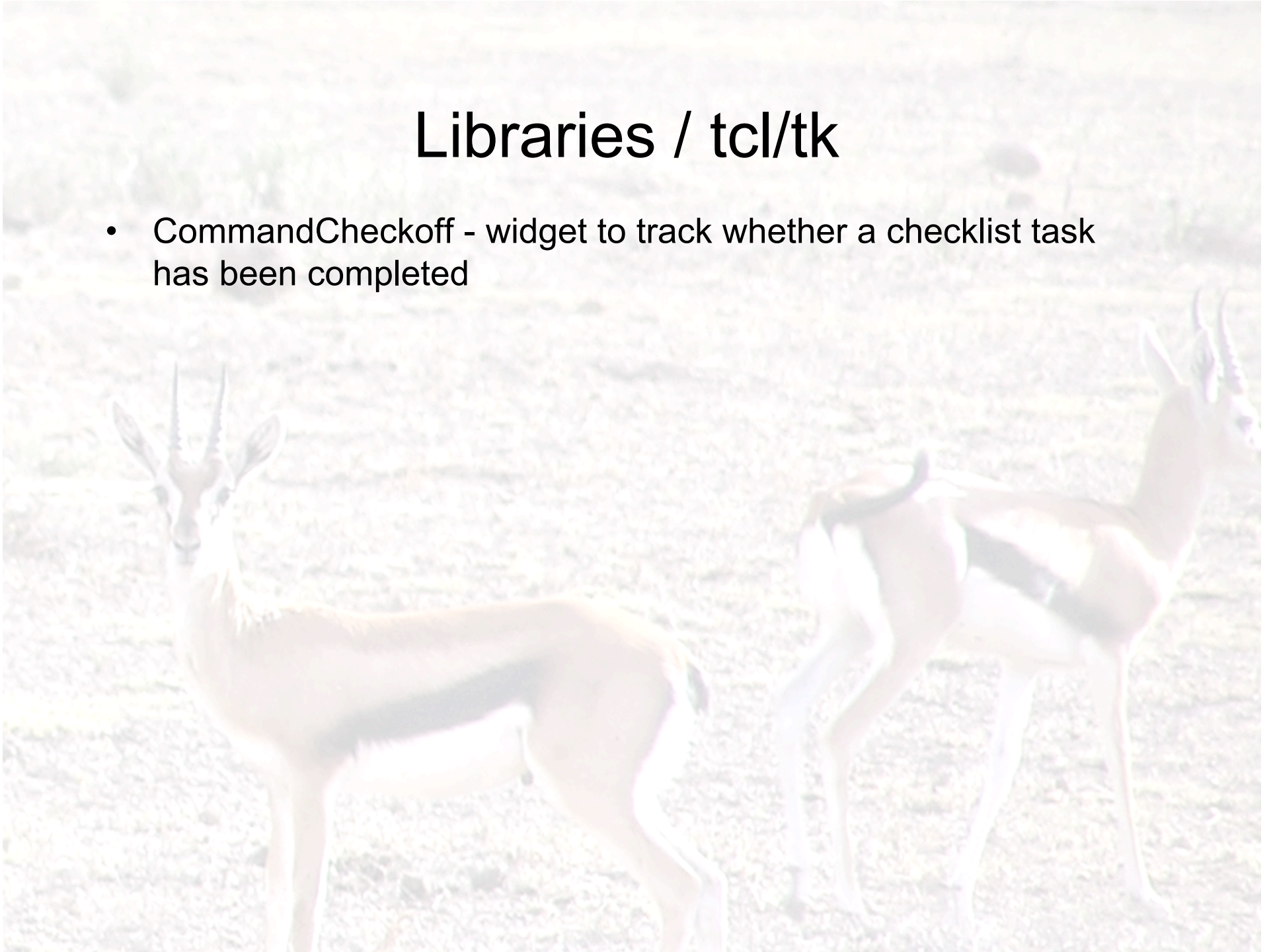
# Libraries / perl

- perlwf - Perl interface to waveform data
- dbrecenteqs - create a map for dbrecenteqs or dbevents
- filemail - mail\_parser handler for filing mail messages in database
- perlpolygon - Perl interface to the polygon library
- winding - winding number routines for Perl
- compass\_from\_azimuth - Perl routine to get compass heading from azimuth



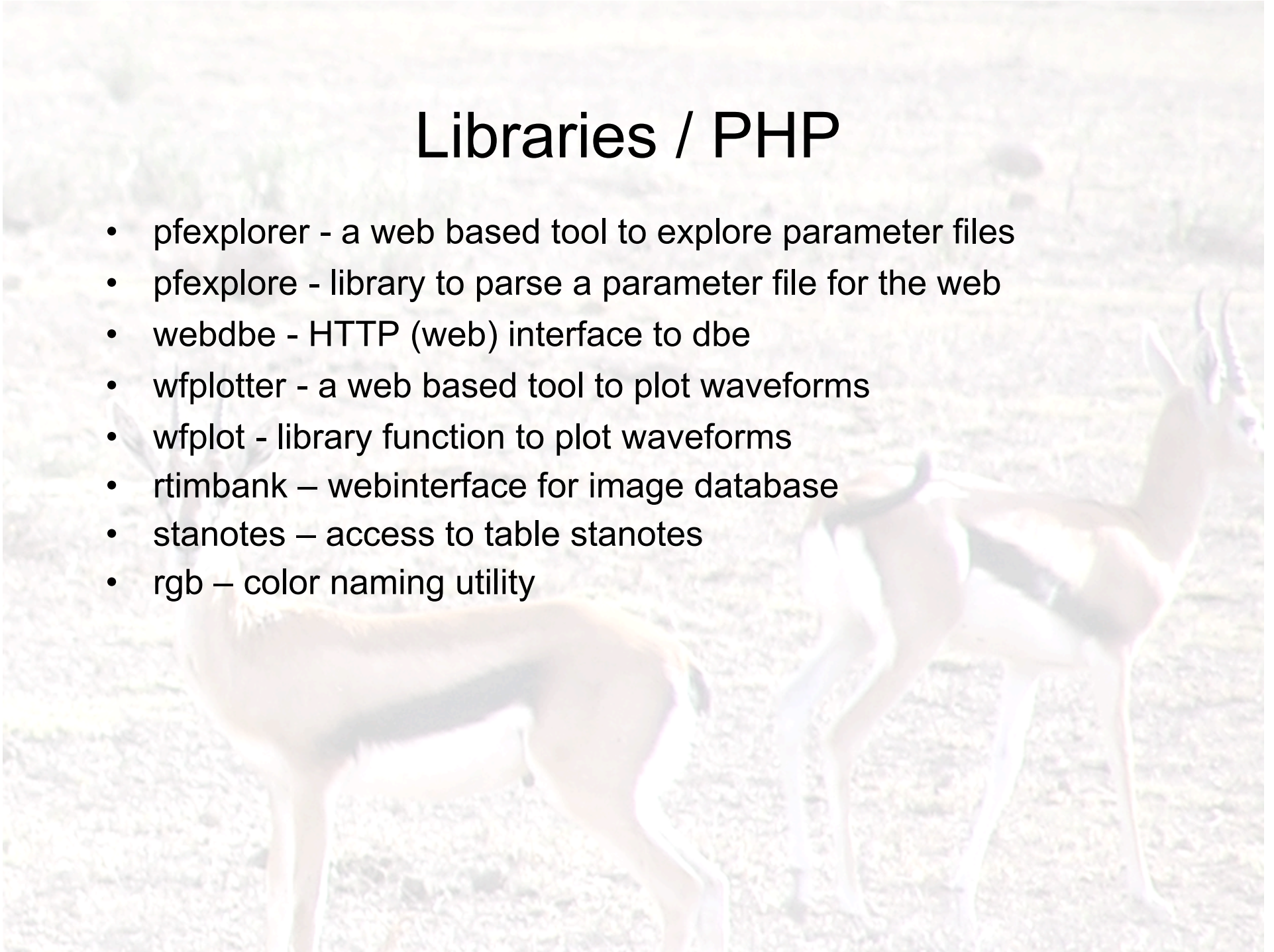
# Libraries / tcl/tk

- CommandCheckoff - widget to track whether a checklist task has been completed



# Libraries / PHP

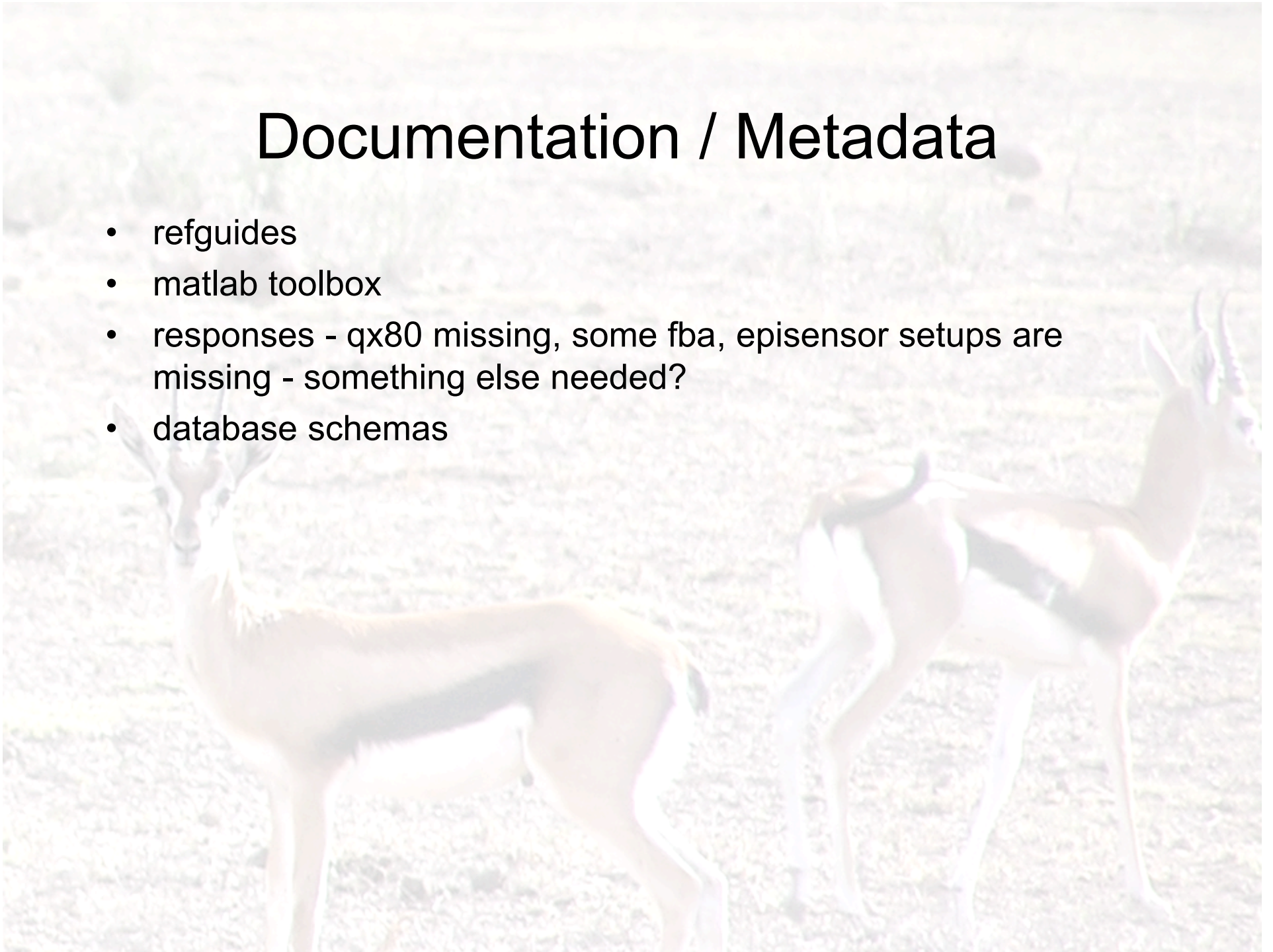
- pfexplorer - a web based tool to explore parameter files
- pfexplore - library to parse a parameter file for the web
- webdbe - HTTP (web) interface to db
- wfplotter - a web based tool to plot waveforms
- wfplot - library function to plot waveforms
- rtimbank – webinterface for image database
- stanotes – access to table stanotes
- rgb – color naming utility





# Documentation / Metadata

- refguides
- matlab toolbox
- responses - qx80 missing, some fba, episensor setups are missing - something else needed?
- database schemas



# Not yet contributed

- rrdtool stuff
- xy2polygon, polygon2xy, example on polygon usage
- outage\_alarm, origin\_alarm
- send\_bulletin
- waves4u2db, make\_autodrm\_request
- autodrm\_proxy
- emscd, mail\_parser\_plugin for different alerts
- http\_live\_seis
- matlab\_polygon
- some variation of k2evt2db
- dbpeek