

Spatial distribution of Fish in the Murray-Darling Basin

Native Fish Strategy Forum - June 15th 2006



Spatial distribution of fish

- > Background
- > Distribution data in disparate locations
- > Reliant on knowledge held by individuals & informal knowledge networks
- > Data limited by jurisdictions
- > Can't communicate distribution of fish

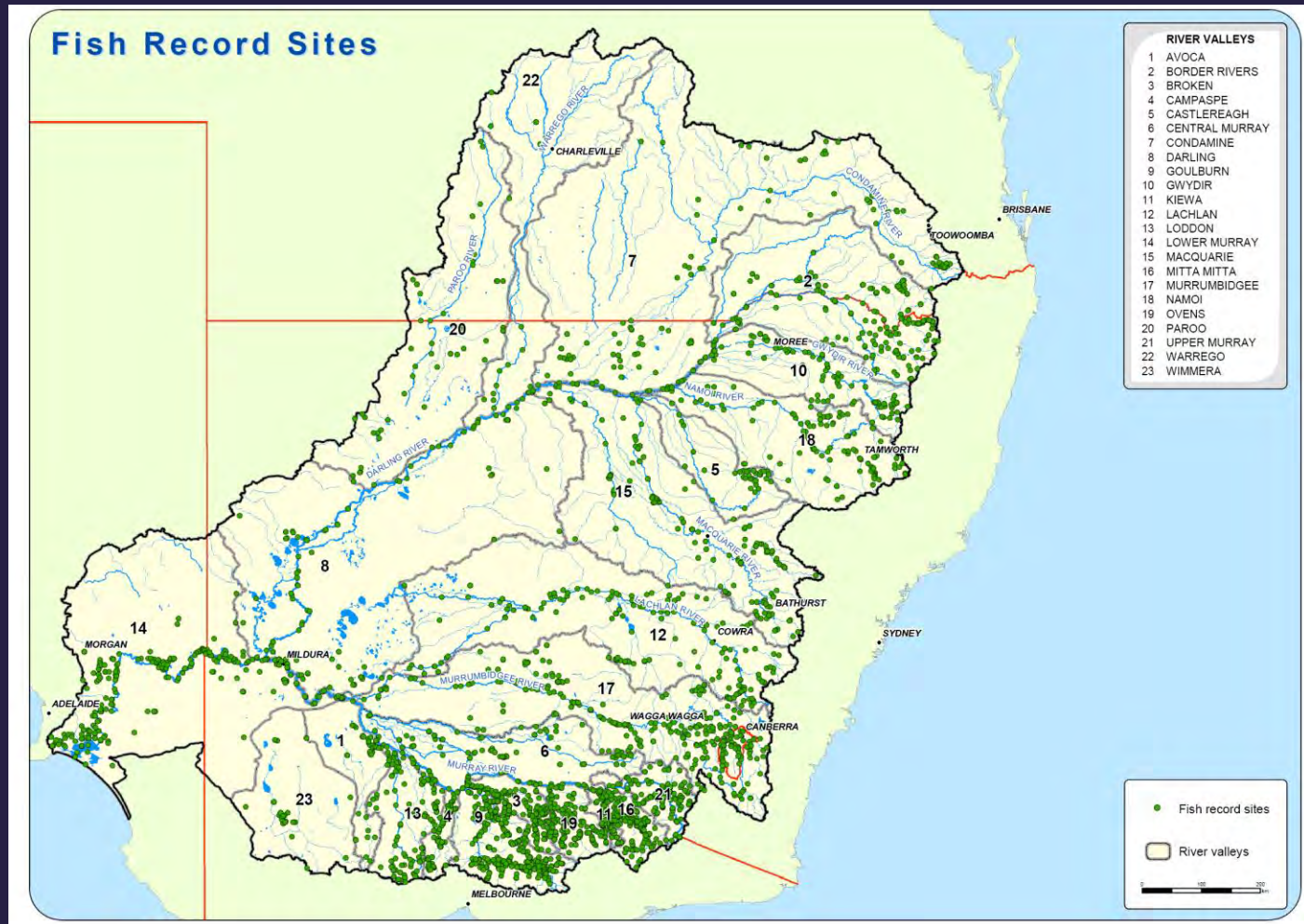
Spatial distribution of fish

- > Objectives
- > To develop a spatial database of fish distribution
- > To collate a broad range of data sources across the MDB
- > Enable the generation of maps of the distribution of species;
- > Enable transfer of knowledge of fish distribution across state boundaries;
- > Establish process for ongoing management & maintenance of the spatial database

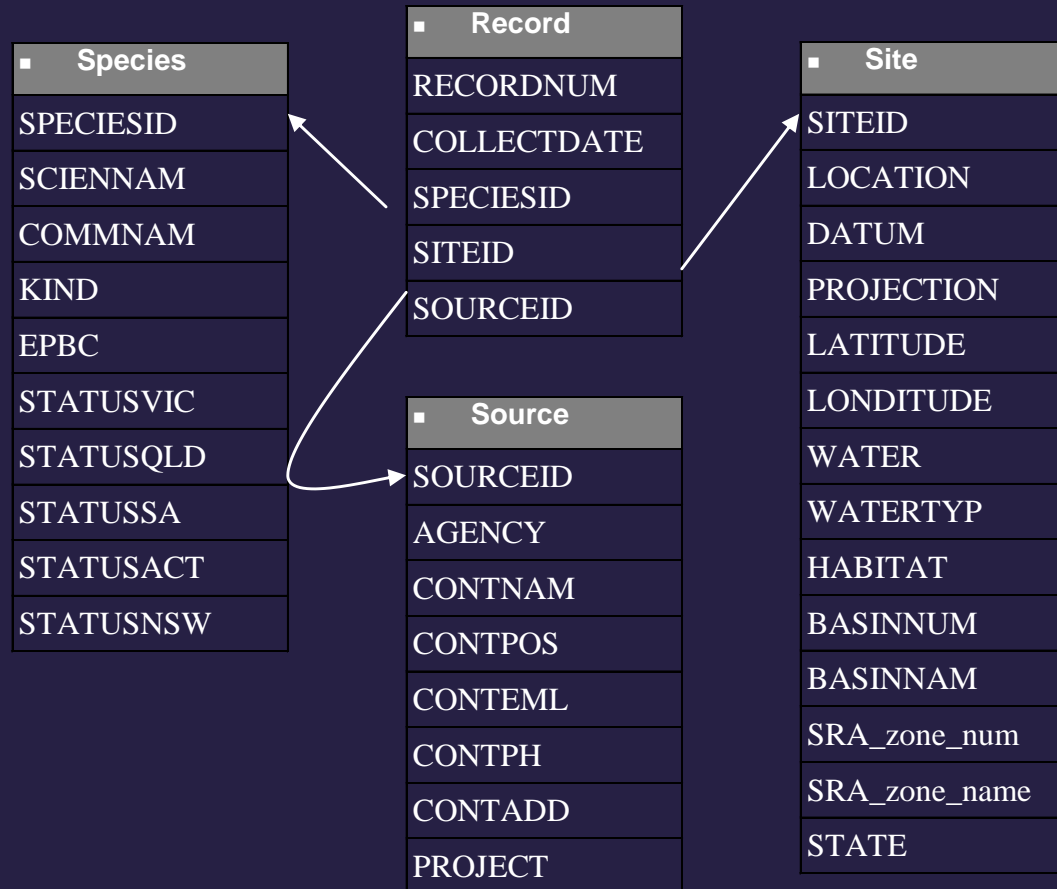
Spatial distribution of fish

- > Results
- > Over 4,000 records entered & geocoded
- > Range of sources: state agencies, museums, reports, journal articles
- > Database has 4 tables: site, record, species & source
- > Geodatabase format provides relational database links and spatial interface in ArcGIS
- > Maps to be produced for all species

Spatial distribution of fish



Spatial distribution of fish



Spatial distribution of fish

The screenshot shows the ArcMap interface with a map of fish distribution. The map displays numerous blue circular markers on a light green background. Three 'Identify Results' windows are open, showing metadata for specific sites. The 'Layers' panel on the left shows 'SITES' and 'MDB_boundary' layers. The 'Spatial Analyst' toolbar is visible at the bottom of the map area.

Identify Results (Top-Left): Location: (144.777979 -34.526287)

Field	Value
SiteID	3507
LOCATION	on the Murrumbidgee River
DATUM	
PROJECTION	
LATITUDE	-34.522
LONGITUDE	144.778
WATER	Dead Finish Lagoon
WATERTYPE	
HABITAT	
BASINNUM	10
BASINNAM	MURRUMBIDGEE RIVER
SRA_VALLEY	MURRUMBIDGEE
SRA_ZONE	lowland
STATE	nsw
Shape	Point

Identify Results (Top-Right): Location: (144.777979 -34.526287)

Field	Value
SpeciesID	64
SCIENNAM	Neocilurus hyrtli
COMMNAM	Hyrtli's Tandan
KIND	Native
EPEC	EPEC
STATUSVIC	
STATUSQLD	<null>
STATUSNSW	

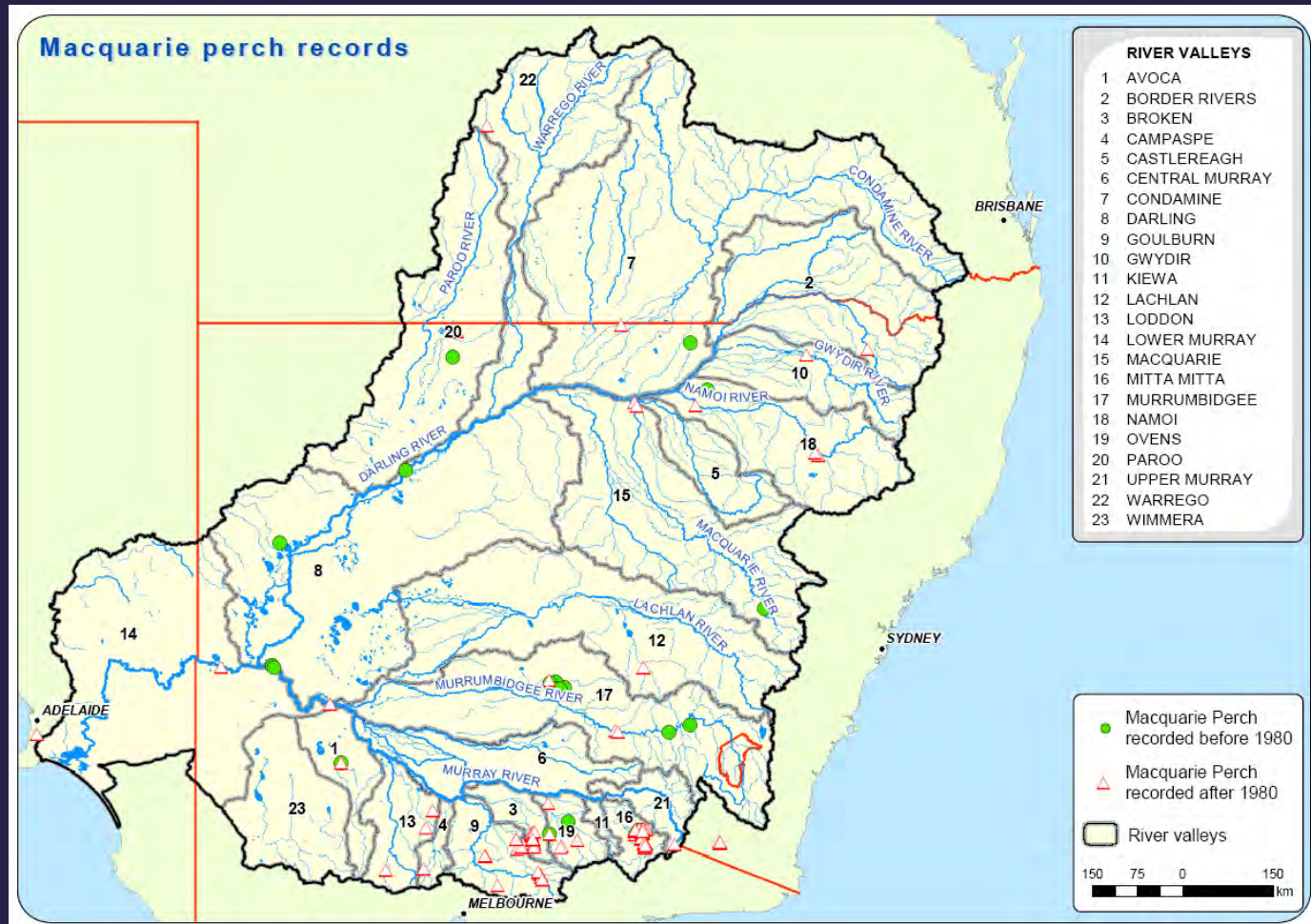
Identify Results (Middle-Right): Location: (144.999571 -35.596793)

Field	Value
RecordNumber	71864
COLLECTDATE	12/05/1998
SpeciesID	15
SiteID	2807
SourceID	8

Identify Results (Bottom-Right): Location: (144.999571 -35.596793)

Field	Value
SourceID	8
AGENCY	NSW Department of Primary Industries
CONTNAM	Bob Creese
CONTPOS	Research Leader, Aquatic Ecosystems Research
CONTEML	Bob.Creese@dpi.nsw.gov.au
CONTPH	02 4916 3806
CONTADD	Port Stephens Fisheries Research Centre, Private Bag 1, Nelson Bay, NSW 2315
PROJECT	Causeway and Culverts

Spatial distribution of fish



Spatial distribution of fish

- > Future actions
- > Validating / evaluating the records
- > Providing access
- > Providing database specifications for use on all projects in the MDBC
- > Linkages with the SRA
- > Updates – annual & triennial