Wetland biodiversity patterning along the middle to upper Fortescue valley (Pilbara: Western Australia) to inform conservation planning

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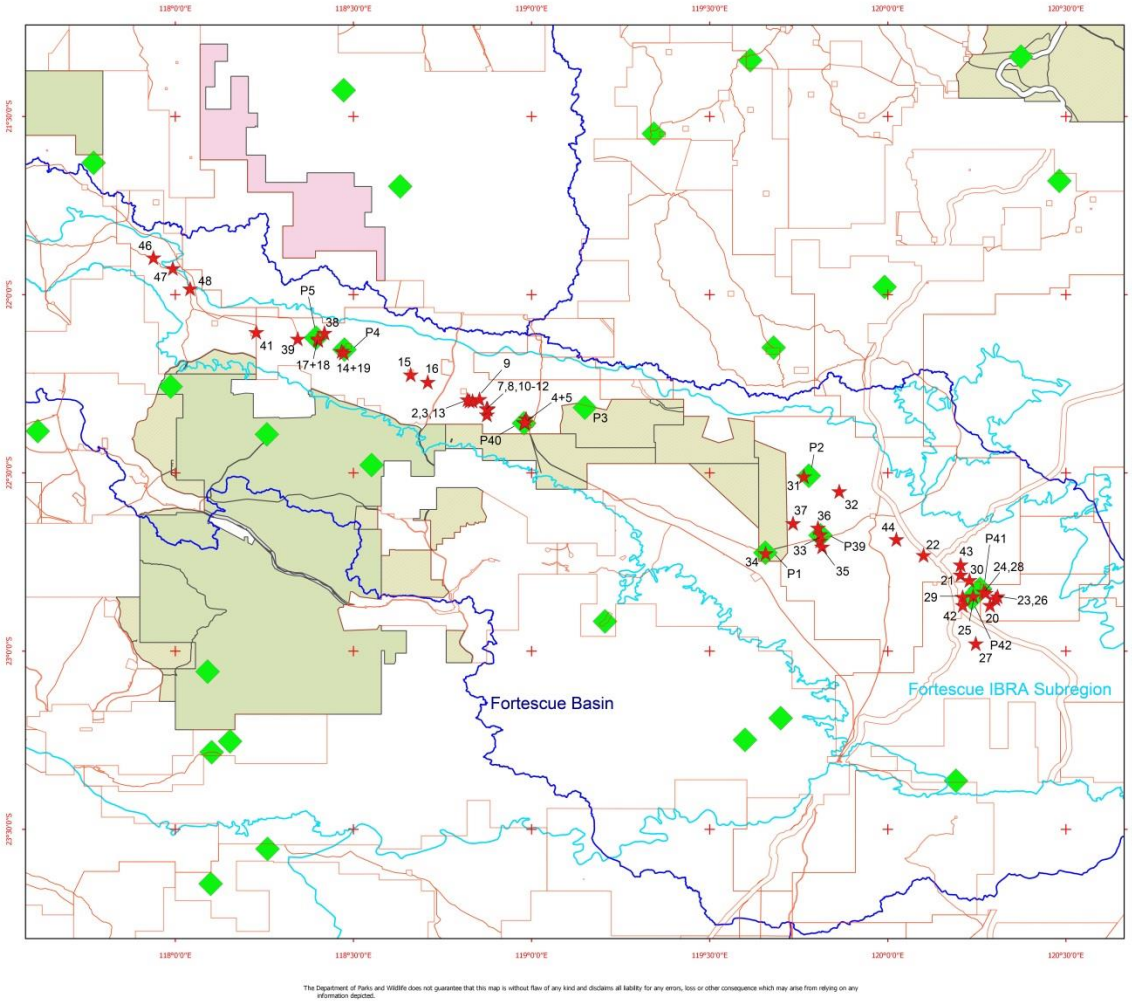
Background

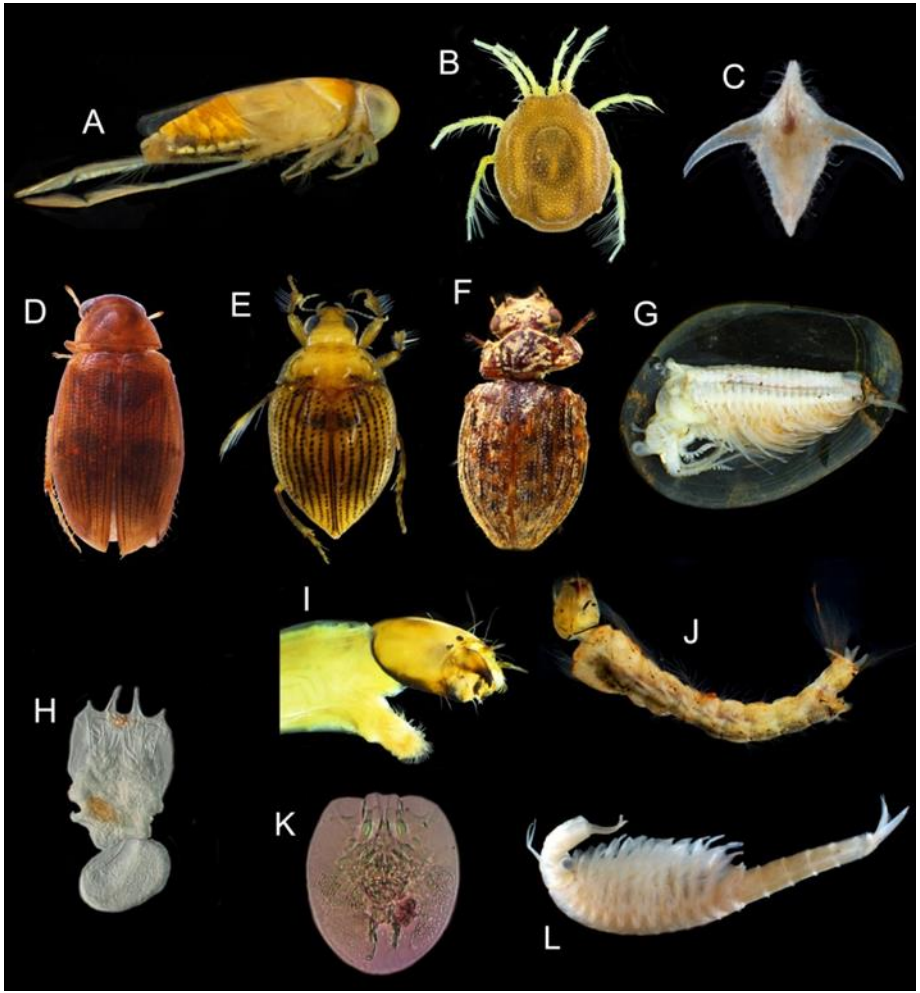
- Fortescue Marsh, claypans, rivers, creeks and associated floodplains identified as priority regional assets for the Pilbara (Rangelands NRM, Greening Australia, Pilbara Conservation Strategy).
- Catchment scale planning required to inform conservation actions
- Existing data not of appropriate scale
  - Pilbara Biological survey - regional scale
  - Fortescue Marsh - detailed floristics and vegetation mapping
- Survey to describe geographic patterning of wetland biodiversity to inform efficient conservation planning.

- Aquatic inverts
  - 39 sites
- Riparian flora
  - 49 sites
- Wet and dry season sampling
- Soils and water chemistry



Diversity

- Invertebrates
  - 600 spp.
  - 50 % of PBS fauna
- Plants
  - 280 spp.
  - 10 taxa of conservation significance
  - 60 % of PBS riparian flora



Spatial patterning

- Broad congruence between patterning of invertebrates and riparian flora
  - River channels compositionally distinct from floodplain wetlands
  - Claypans in the east associated with Jigalong Creek floodplain different from remainder of study area
  - Large morphologically diverse claypans in the west of the study area capture restricted elements of the Pilbara riparian flora and characteristic suite of invertebrates

Management

- Spread across region
- Manage suites of wetlands
- Permanent river pools
- Manage wetlands during dry season