

1 List of Figures

2 Fig 1. Location of wetlands in this study: a) location of the Archer River catchment in northern
3 Queensland, Australia and b) wetland sites on the coastal floodplain and mid catchment where
4 feral pig fencing has been completed around wetlands preventing access (yellow circles). The
5 three wetland typologies (C – pig impacted wetlands that are shallow (typically <0.5m deep),
6 without submerged aquatic vegetation, turbid and eutrophic; D – fenced wetland preventing pig
7 access that are deeper (typically <2m deep), clear with submerged aquatic vegetation present)
8 exist across the catchment; and E – permanent wetlands that are deeper (typically <2m deep),
9 steep sides limiting pig access, clear with submerged aquatic vegetation present. Archer River
10 gauge station (red circle).

11

12 Fig 2. Daily discharge at the Archer River roadhouse gauge (Figure 1) before and during
13 (dashed insert box) this study. Sampling occasions (arrows) are indicated. Data provided by
14 the Queensland Government.

15

16 Fig 3. Examples of the diel dissolved oxygen, pH, water temperature and conductivity cycling
17 in Archer River wetlands. These examples are from KA06 during post-wet season (a), and
18 late-dry season (b) in 2016, and AR01 during post wet season (c) and late-dry season (d) in
19 2016.

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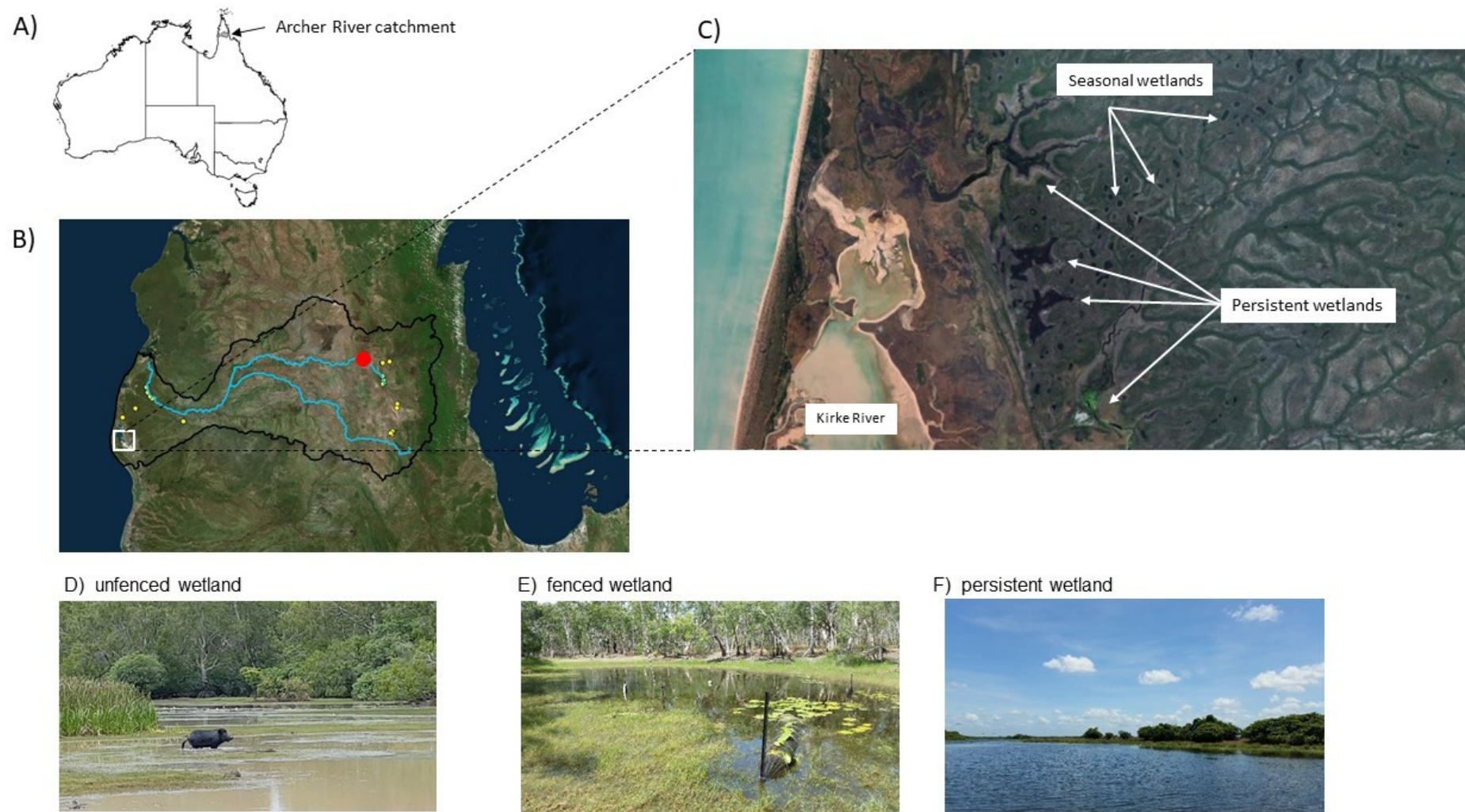
21 Fig 4. Multivariate regression tree showing the major divisions in the database on assemblage
22 composition. Each of the splits are labelled with the contributing variable, and the division
23 threshold (in the case of electronic conductivity; EC, and dissolved oxygen; DO). The length
24 of the descending branches is proportional to the divergence between groups. Bar plots
25 represent the fish assemblage composition at the corresponding colour code node sharing the

26 same attributes. Values in the bar plots represent the relative frequencies of occurrence of each
27 taxon within a same node.

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29 Fig 5. Conceptual diagram of wetland ecosystem conditions during (a) wet season, and (b)
30 late-dry season. During the wet season, the lateral connection between the Archer River
31 channel and wetlands occurs, during which fish can access wetlands and water quality is
32 generally best because feral pig impact is minimal regardless of fencing. The dry season
33 results in water retracting from the land margins, allowing pigs to access unfenced wetlands.
34 At this stage, water quality conditions are poor in unfenced wetlands with high
35 turbidity/nutrients and temperature, and dissolved oxygen is generally critical for fish. Fenced
36 wetlands become shallower too, through temperature and dissolved oxygen cycling reduced,
37 turbidity is low ($<20\text{NTU}$), while nutrients can be also high ($>20\text{NTU}$). Regardless of fencing,
38 fish community reduced to a few resilient species dominated by juveniles ready for rapid
39 dispersal when wet seasons commences again.

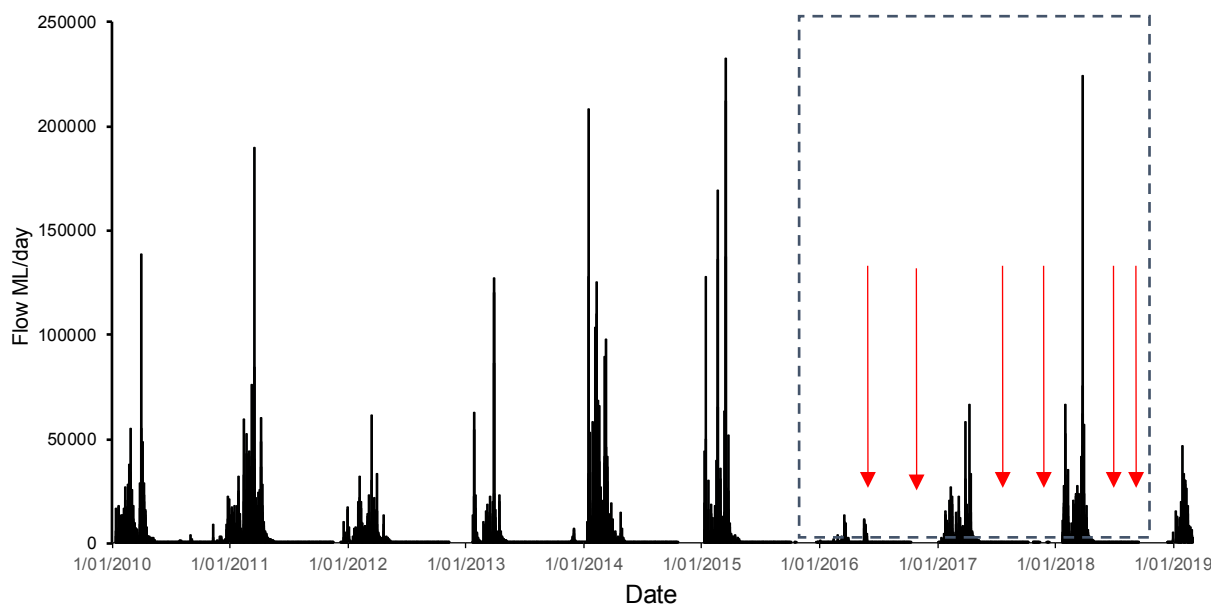
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42 Fig 1.

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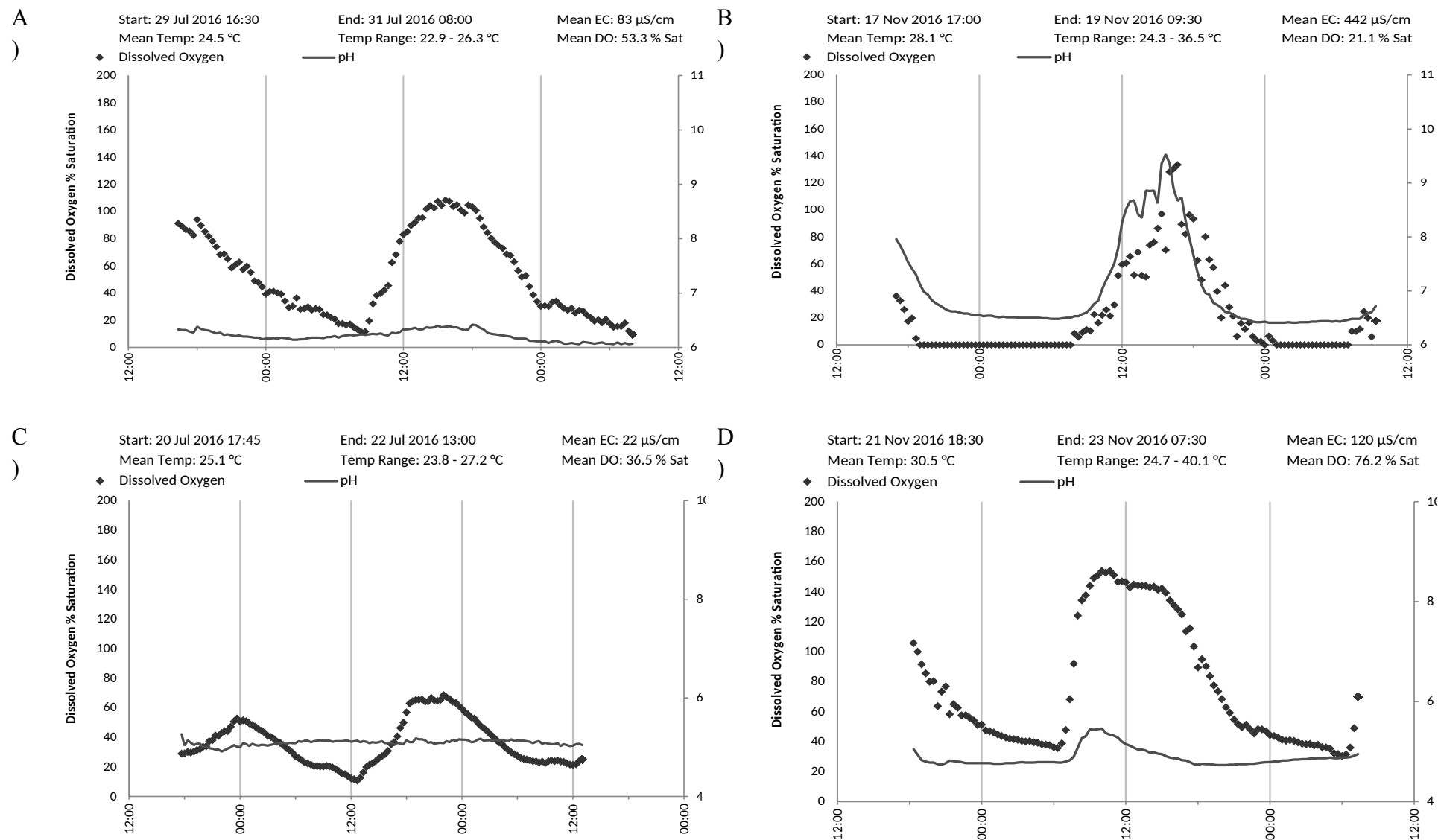
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46 Fig 2

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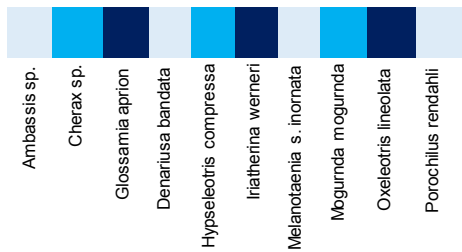
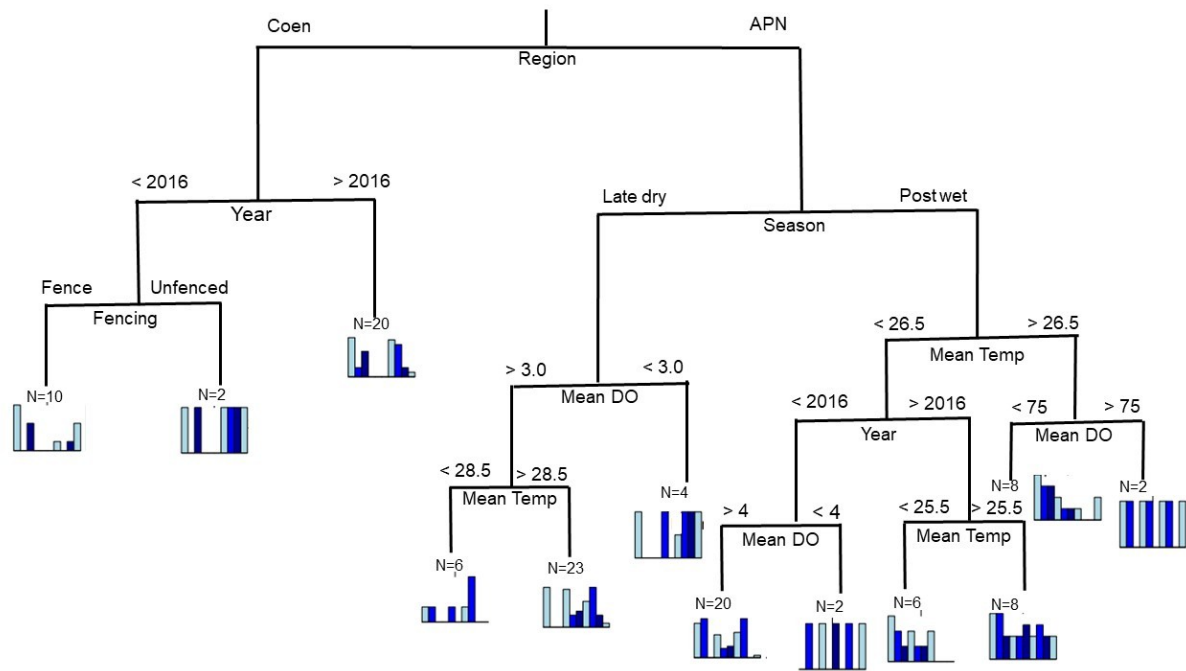


Fig 4.

