Fitzroy estuary - macrobenthos

Fitzroy estuary assessment
FE1 – Eco-health monitoring

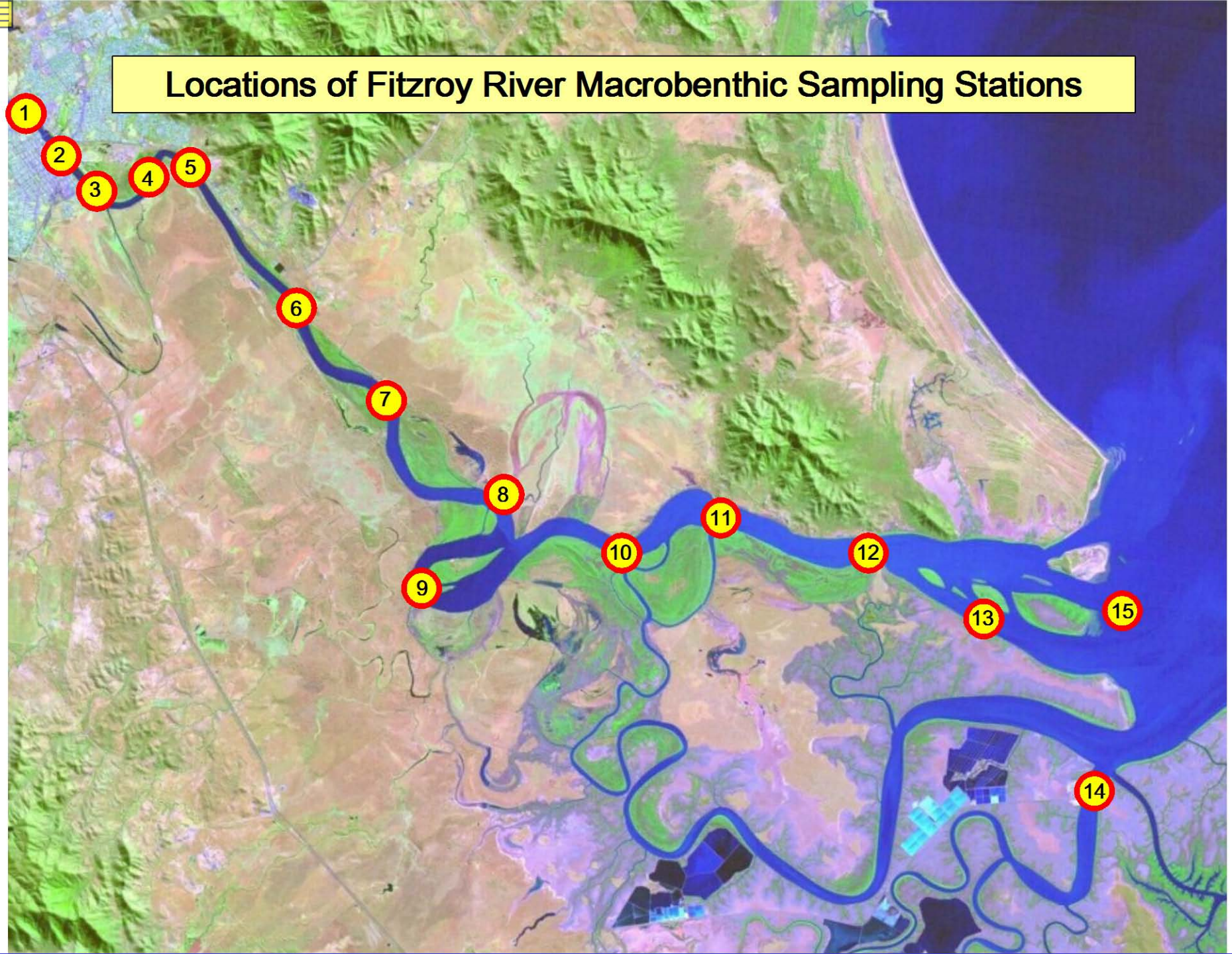
Centre for Environmental MANAGEMENT GLADSTONE

CRC for Coastal Zone Estuary & Waterway Management

Why use macrofauna to assess Fitzroy ecosystem health ?

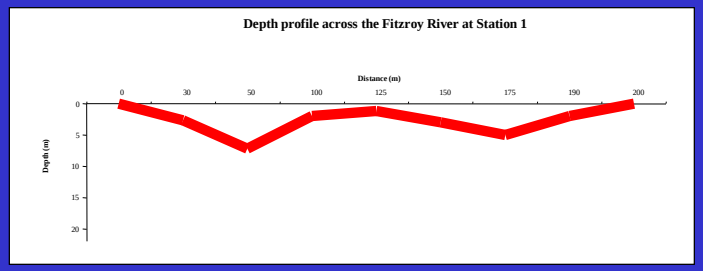
- Many organisms are relatively non-mobile and integrate effects of pollutants over time
- They are comparatively easy to quantitatively sample
- Major changes in keystone macrofaunal species can have profound impacts on higher trophic groups
- Facilitates comparative assessment of health in Port Curtis

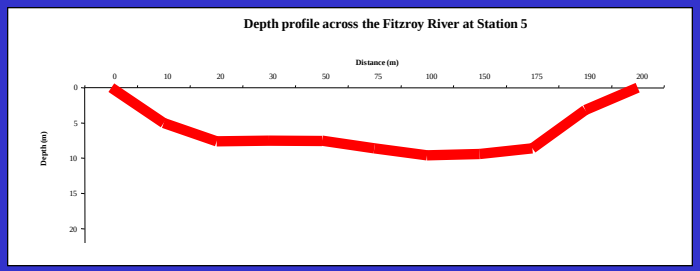
Locations of Fitzroy River Macrobenthic Sampling Stations

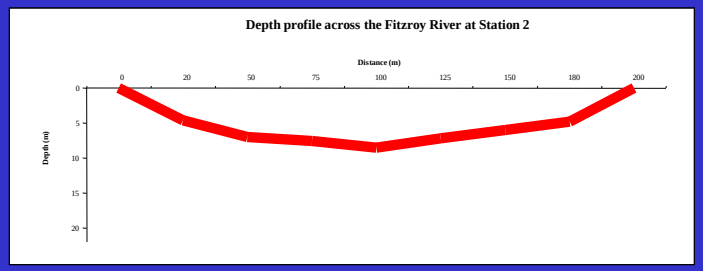


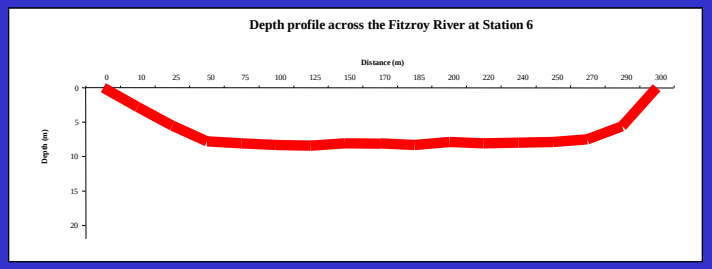
Thunder Cat
2324SQC
YAMAHA
130
PERSONS

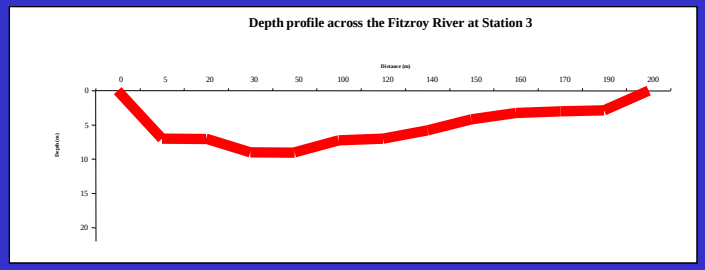
Depth profiles for the Fitzroy River, Stations 1-8.

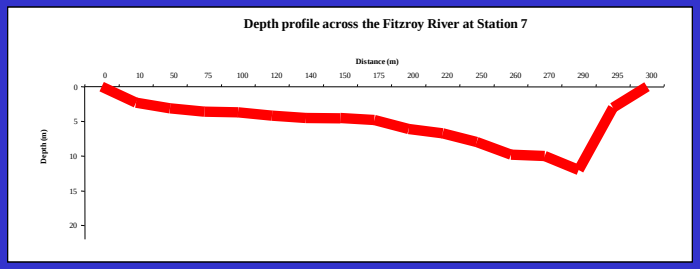


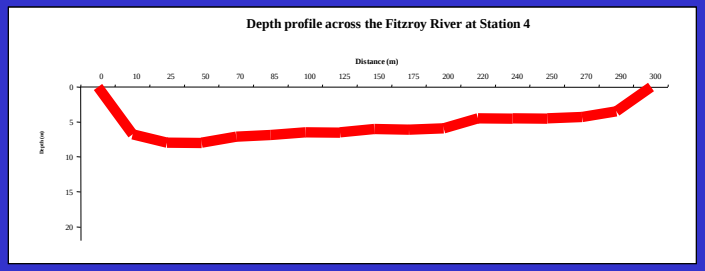


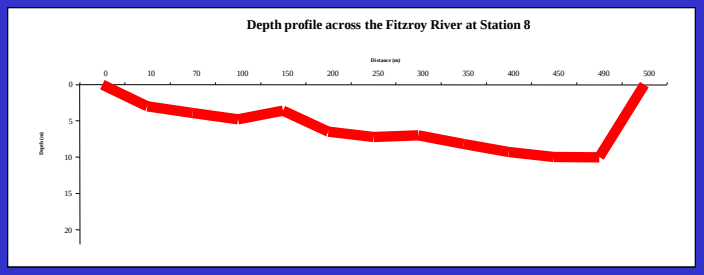




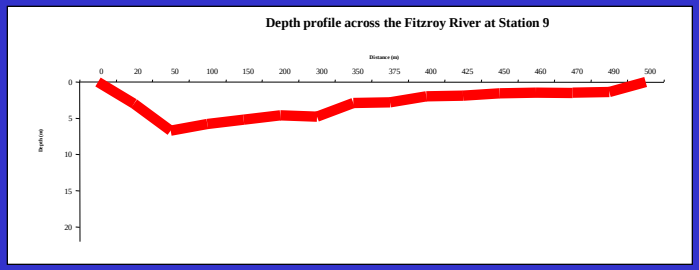


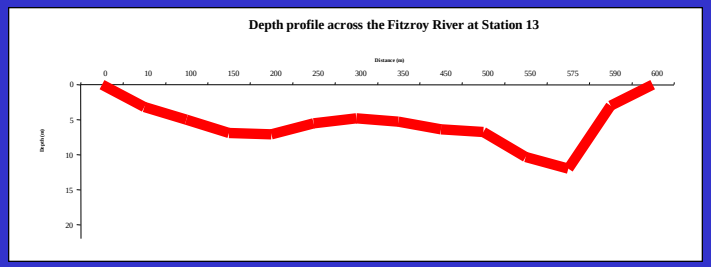


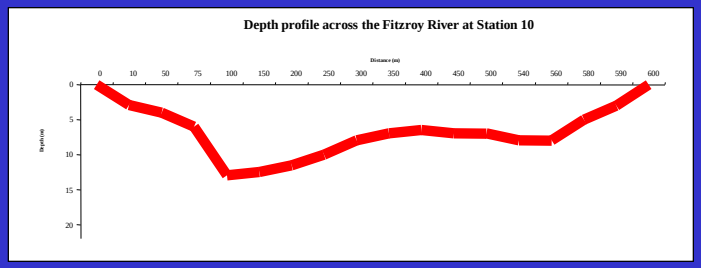


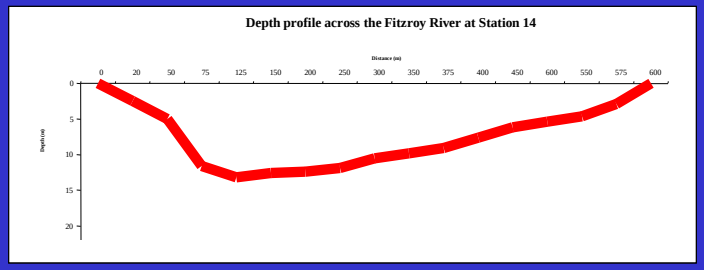


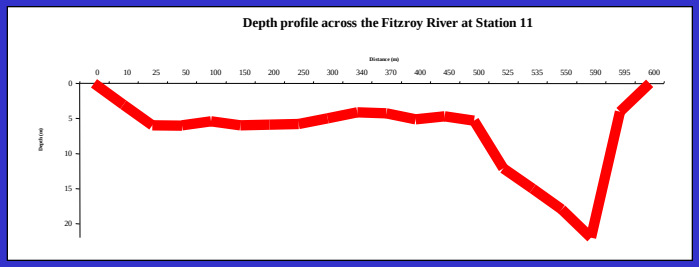
Depth profiles for the Fitzroy River, Stations 9-16.

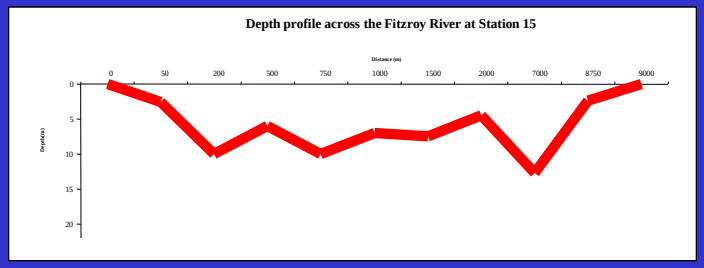


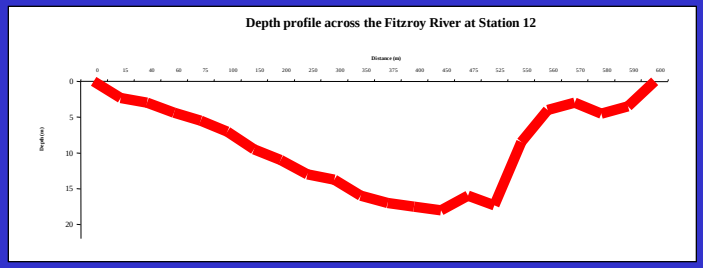


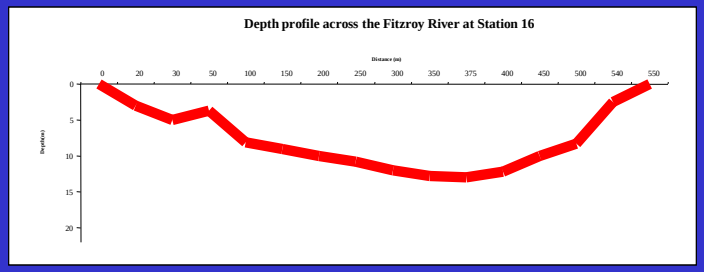




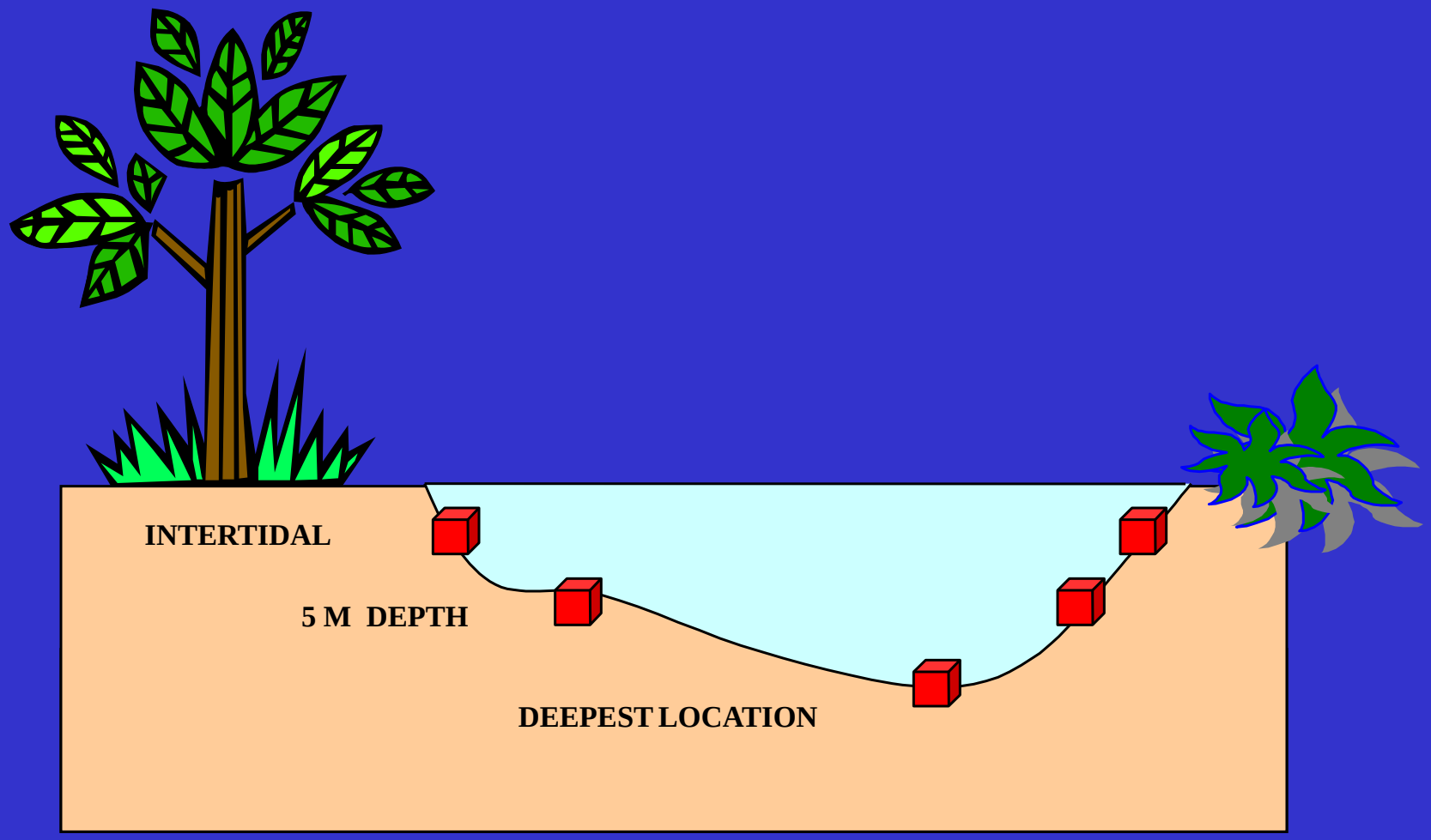






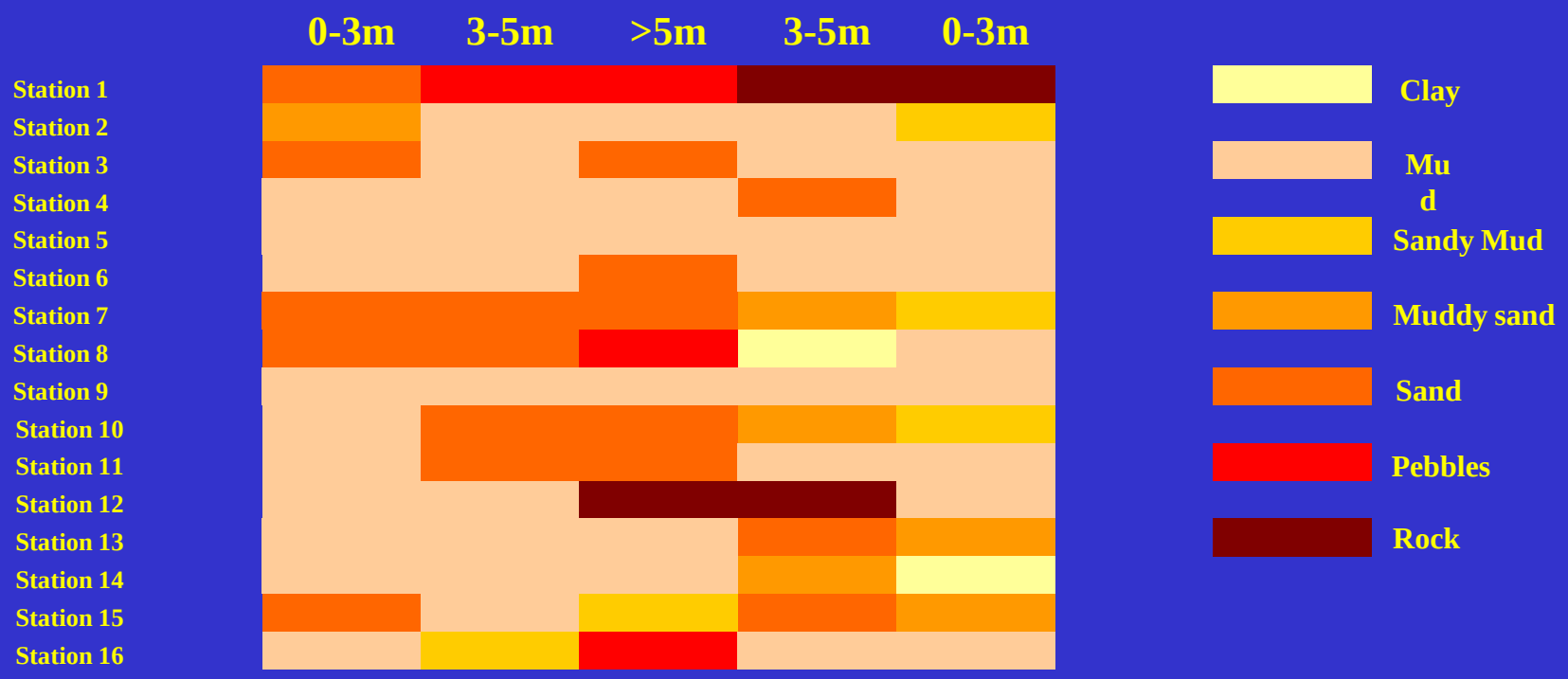


Fitzroy River - schematic sampling design



AUG 96

Fitzroy River sediment profile



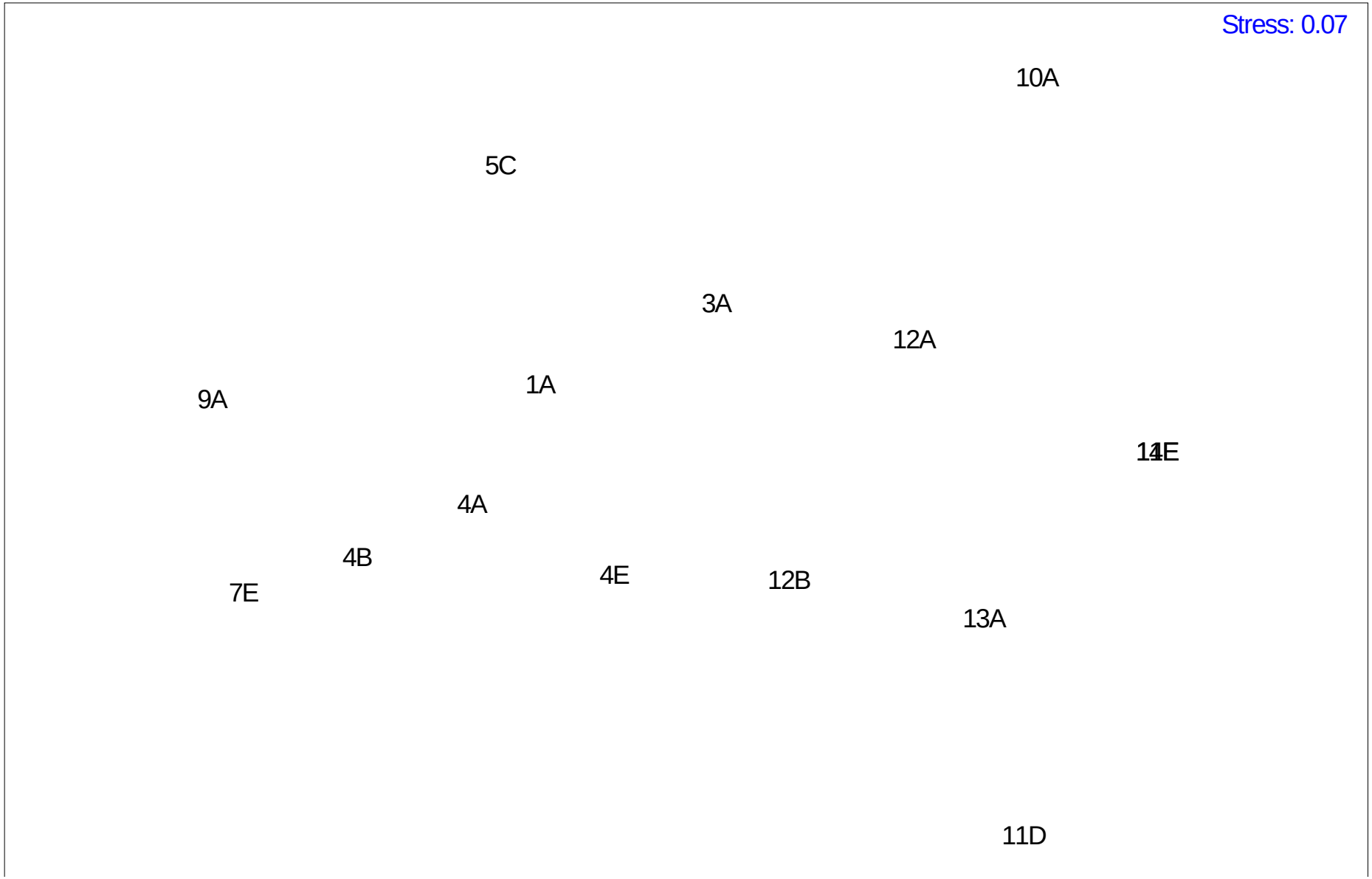
22 LB.

Summary of taxonomic groups found in 15 of 80 Fitzroy benthic grab samples

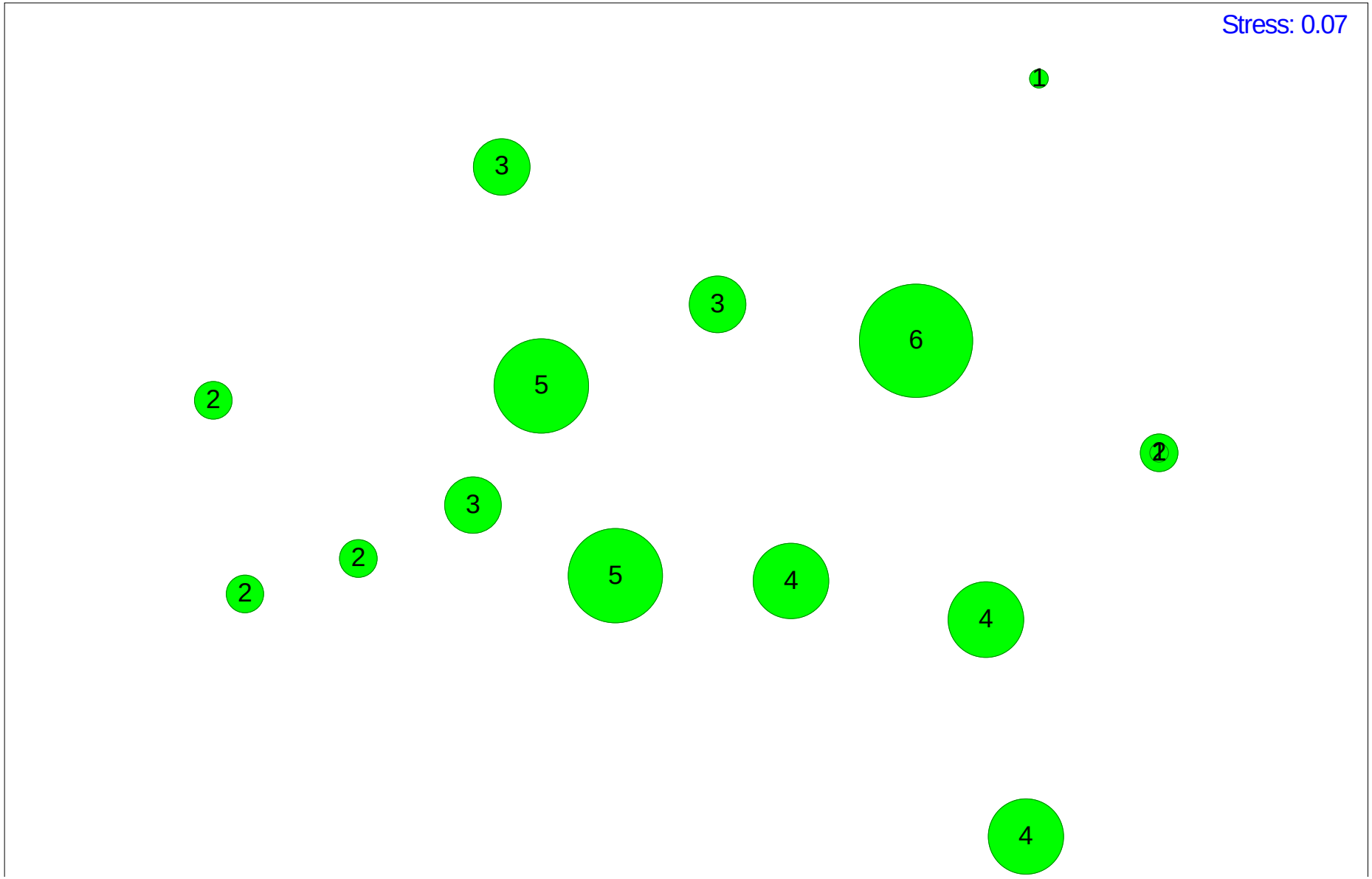
Taxa	No. Species	No. Individuals
Polychaetes (worms)	15 (60%)	157 (7%)
Bivalves (shellfish)	3 (12%)	1989 (90%)
Crustaceans (crabs/prawns etc.)	7 (28%)	57 (3%)
Total	25	1989

Macro-invertebrates commonly encountered in the Fitzroy River

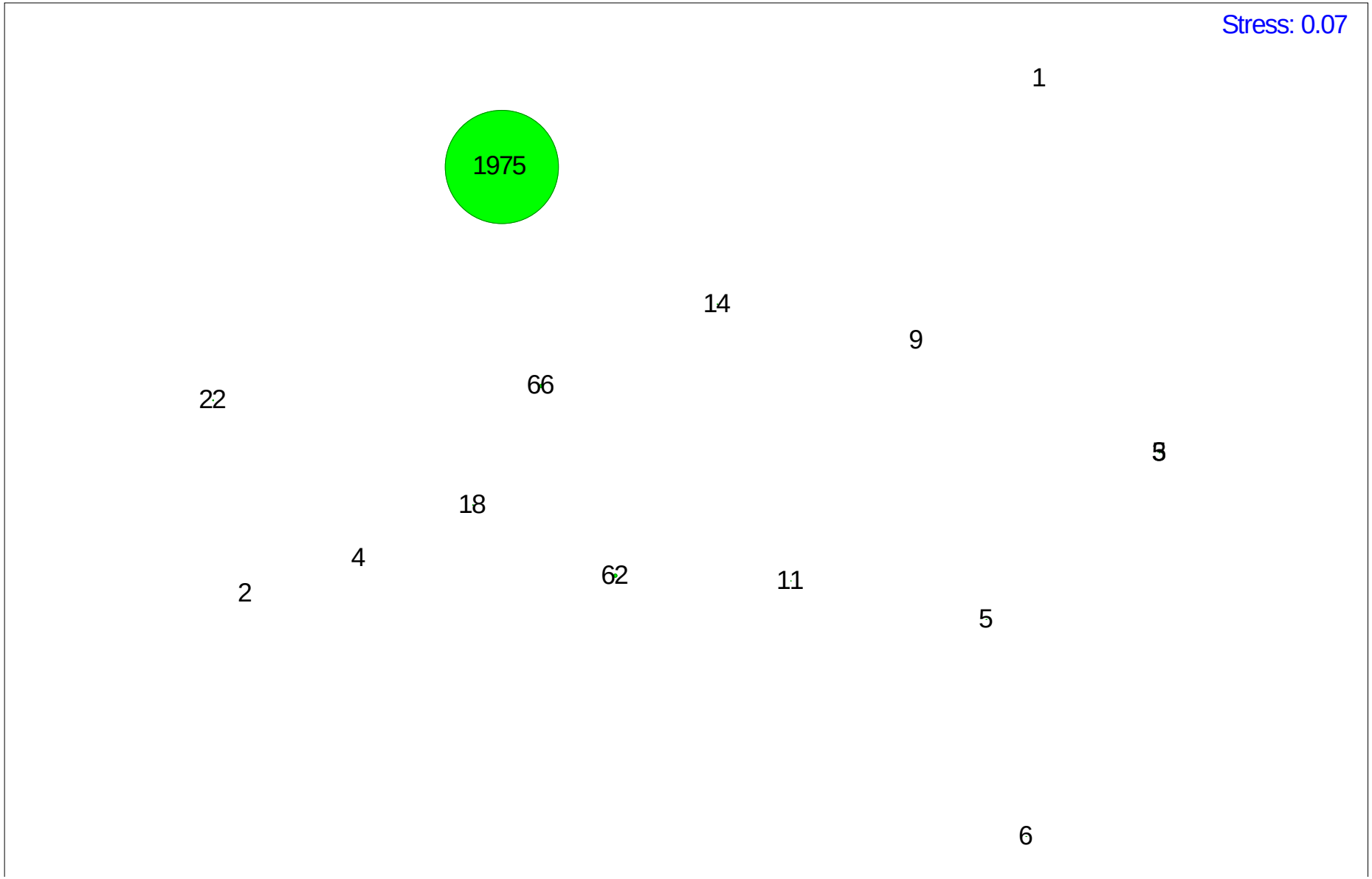
NMDS ordination of DSQRT Fitzroy estuary macrobenthos



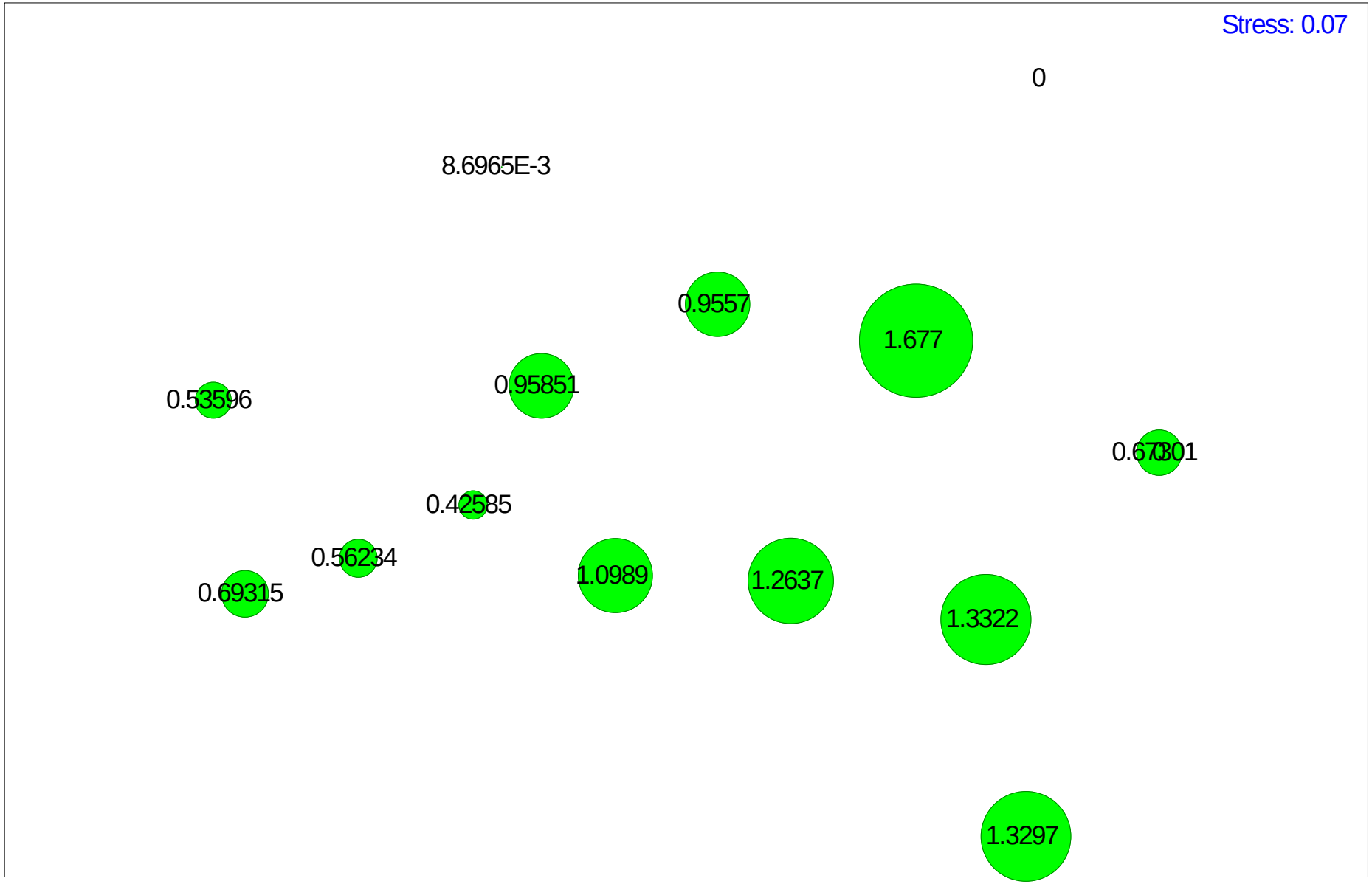
Species richness superimposed on ordination of Fitzroy estuary macrobenthos



Total sp. abundance superimposed on ordination of Fitzroy estuary macrobenthos



Shannon-Weiner diversity superimposed on ordination of Fitzroy estuary benthos



Where to from here ?

Complete macrobenthic sorting / analysis

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Undertake Mangrove assessment

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Link with the EPA and other task data (i.e. FE2 - Remote sensing, FH - Nutrients)

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Identify appropriate indicators to monitor ecosystem health