

---

## 5. Reefs of the Great Barrier Reef: status and trends

### ***Explanation of the reef status pages***

This section contains data on each reef surveyed in the 1998 field season. An aerial photograph of each reef shows the size and orientation of the reef, location of fixed transects and the manta tow path. Dotted lines indicate the manta tow path.

Numbered dots correspond to tow number in Figure A. The solid line indicates the area covered by fixed transects. The physical geography of the reef is described below the aerial photograph. Reefs are ordered alphabetically within the sectors, with the core survey reefs first, followed by reefs that are only surveyed by manta tow. The sectors are presented in order from north to south .

### **Manta tow surveys**

Figure A is a histogram showing coral cover categories recorded by observers for each two minute manta tow for 1998. This information provides an overview of the current status of a reef in terms of spatial distribution of coral cover and COTS around the perimeter.

Figure B provides an overview of the reef over the history of manta tow surveys. Median coral cover and the number of COTS per tow counted for each year are presented.

### **Benthic video surveys**

Data on benthic organisms and fishes are also presented for the 48 core reefs where permanent monitoring sites are located. For benthic organisms, three figures (C, D, and E) describe the trends in percentage cover over time for the major benthic groups, for major benthic families and for groups within the family Acroporidae respectively. Each plot shows the distribution of mean cover based on survey sites and the fitted trend line. The significance level and direction of the trend is coded in the legend: a period (·) indicates no significant trend, a plus sign (+) indicates a significant positive trend and a minus sign (-) indicates a significant negative trend (see Appendices I and J). Symbols before the slash refer to the general trend over the six years; symbols after the slash refer to the trend at the 1998 survey, thus '·/-' would indicate that a taxon has shown no net trend over the six years, but there is currently a significant decreasing trend. '+/+' would indicate that a taxon had increased significantly over the six years and was continuing to do so.

A fourth figure (F) is included for reefs where significant bleaching occurred (Havannah Island, Middle and Pandora Reefs). The figure shows percentage cover of bleached and unbleached corals from 1997 and 1998.

---

### **Visual fish census surveys**

Another four figures (G, H, I and J) on the facing page show the trends of fish abundance over time for reef fish groups where abundance is greater than 5 per site for at least one survey. The four plots show the scatter of mean fish abundance. Figures G and H show trends in the major reef fish families and Figures I and J show trends in the damselfish genera. The significance levels and direction of the trends are coded in the legend in the same way as those for the benthic video surveys.

### **Written summary**

A summary of the status and trends is given for each reef.