Plate 7.1. Ledges along the forereef spur formations are a favorite shelter for many reef fishes.

Plate 7.2. Parrotfishes, the largest herbivores, are frequently seen in the forereef, buttress, and rubble zones. Shown are schools of rainbow parrotfish (*Scarus guacamaia*) in the rubble zone (top) and midnight parrotfish (*S. coelestinus*) in the forereef zone (bottom).

Plate 7.3. The three spot damselfish (*Pomacentrus planifrons*) (top) is herbivorous and usually found defending a territory in branches of elkhorn coral (*A. palmata*). These fishes are one of the most aggressive species on the reef and will not hesitate to attack a fish (or diver) hundreds of times its size. Often large schools of surgeonfishes (bottom) or parrotfishes temporarily overwhelm the defenses of a single damselfish before moving on to new areas. The predatory trumpetfish, shown in the center of the photograph, often uses the confusion created by the activity of these schools of fish to approach and attack small reef fishes.

Plate 7.4. Two of the larger schooling midwater fishes are the Bermuda chub (*Kyphosus sectatrix*) (top) that feeds primarily an drifting algae and the yellowtail snapper (*Ocyurus chrysurus*) (bottom) that feeds primarily on plankton when small and on fishes when larger.

Plate 7.5. The sharpnose puffer (*Canthigaster rostrata*) (top left) feeds by picking small microinvertebrates off the bottom. Angelfishes primarily browse on sponges. Shown are the rock beauty (*Holocanthus tricolor*) (top right) and an adult French angelfish (*Pomacanthus paru*) (bottom).

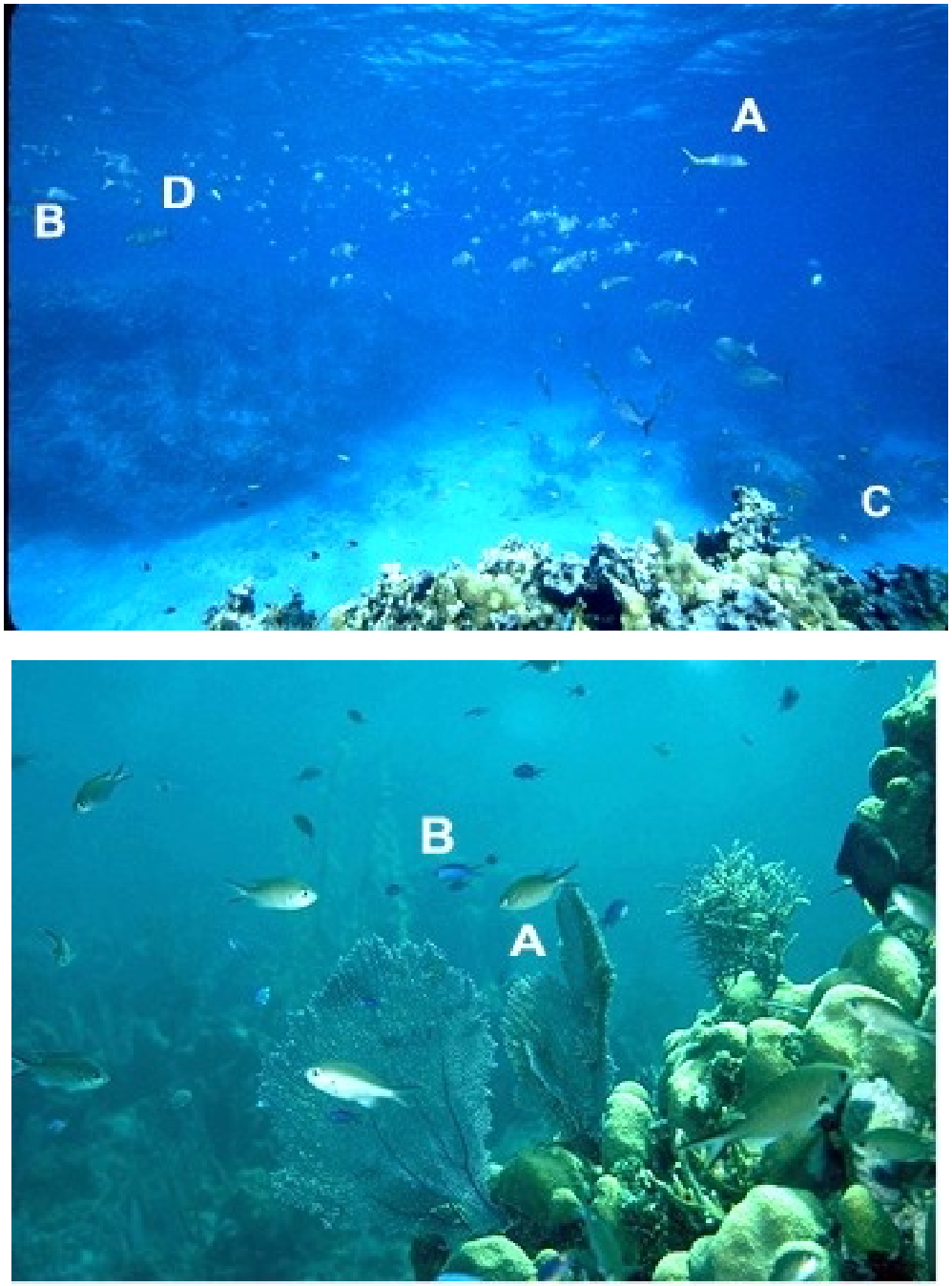

Plate 7.6. Typical assemblages of fishes feeding in midwater: (top) *A. piscivorous* yellowtaii (*Ocyurus chrysurus*); B. algivorous bermuda chub (*Kyphosus sectatrix*); and C. planktivorous bluehead wrasses (*Thalassoma bifasciatum*); D. sergeant majors (*Abudefduf saxatilis*); E. bicolor damselfishes (*Pomacentrus partitus*); and (bottom) A. brown chromis (*Chromis multilineatus*) and B. blue chromis (*Chromis cyaneus*).

Plate 7.7. Common diurnally active microinvertivores include the foureye butterflyfish (*Chaetodon capistratus*) (top) and the harlequin bass (*Serranus tigrinus*) (bottom).

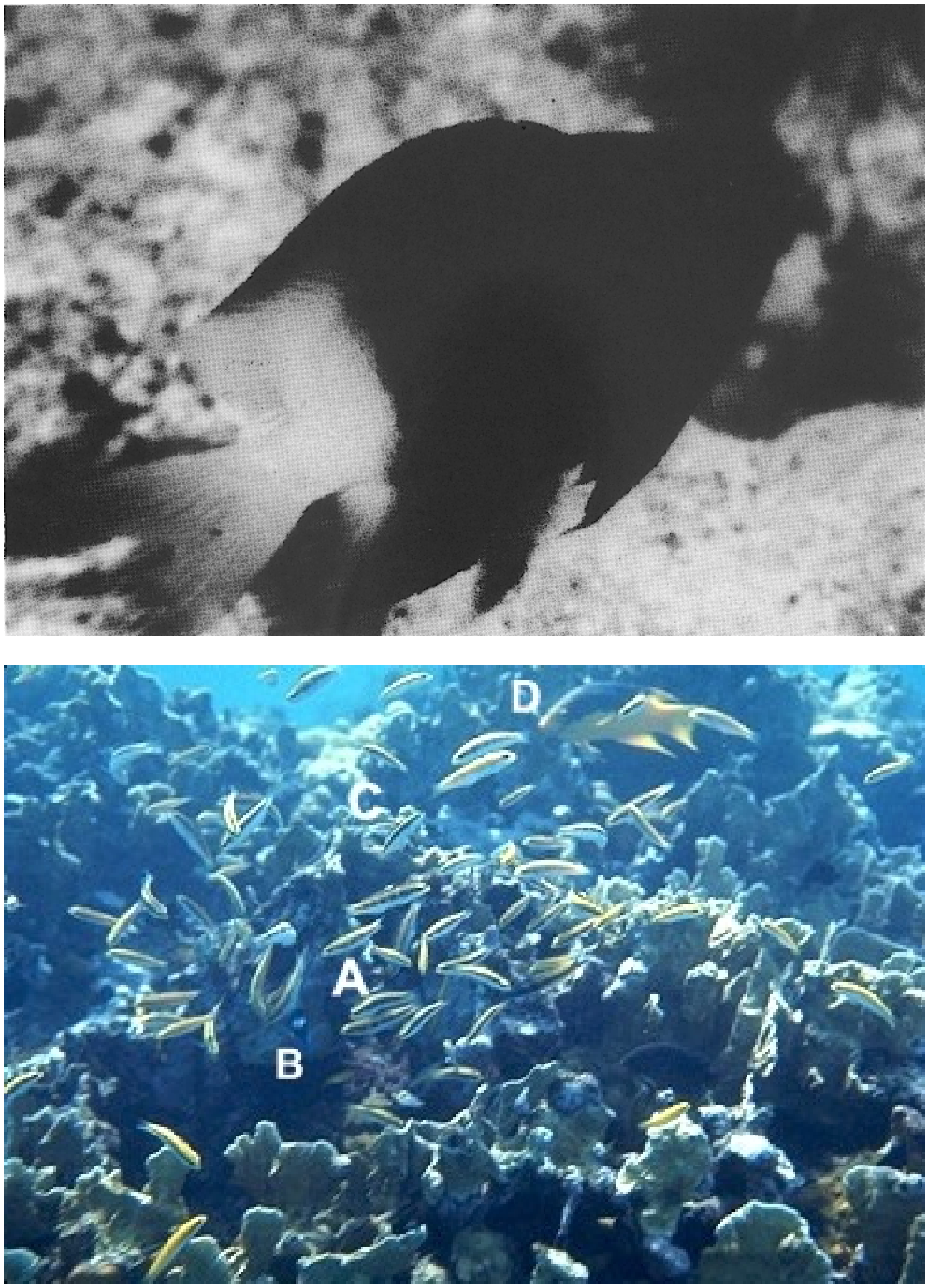

Plate 7.8. Two of the most abundant fishes at Looe Key Reef are the bicolor damselfish (*Pomacentrus partitus*) (top) and the bluehead wrasses (*Thalassoma bifasciatum*) (bottom). Many wrasses change sex and color with age. Shown are mostly (A) juvenile colored blueheads, (B) a supermale bluehead, (C) a clown wrasse (*Halichoeres maculipinna*), and (D) a hogfish (*Bodianus rufus*).

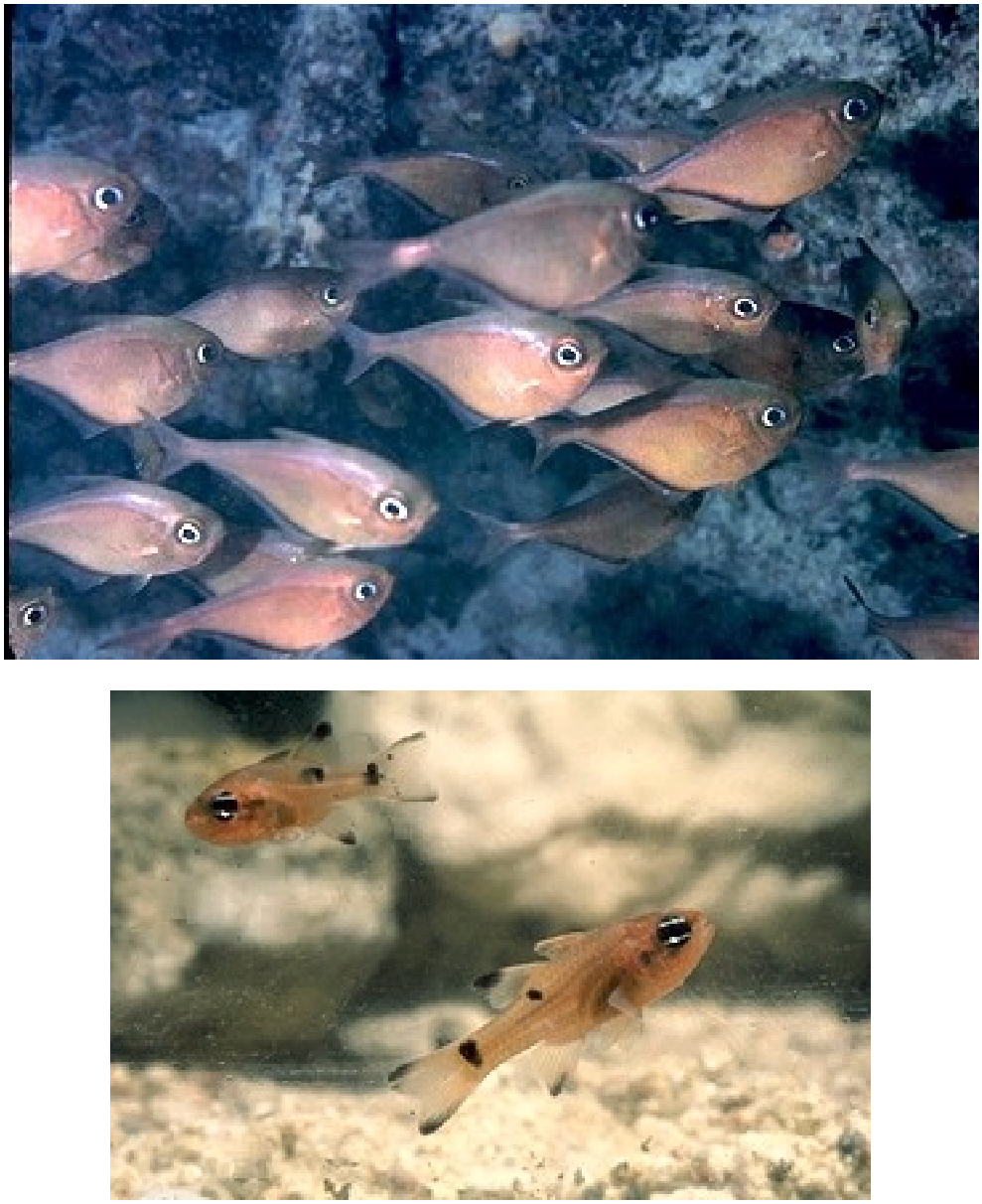

Plate 7.9. Glassy sweepers (*Pempheris schomburgki*) (top) and the twospot cardinalfishes (*Apogon pseudomaculatus*) (bottom) hide in caves in the reef by day and come out to feed on plankton at night.

Plate 7.10. Grunts (Haemulidae) are one of the most important groups of reef fishes in terms of species, abundance, and biomass. Although seen in schools on the reef during the day, most species feed on invertebrates away from the reef at night. The white grunt (*Haemulon plumieri*) (top) is most abundant on inshore hard bottoms. The tomtate (*H. aurolineatum*) dominates the forereef zone.

Plate 7.11. Goatfish and mojarra feed primarily on microinvertebrates in sand bottoms. Shown are schools of yellowfin mojarra (*Gerres cinereus*) (top) and yellow goatfish (*Mulloidichthys martinicus*) (bottom).

Plate 7.12. The sailor's choice (*Haemulon parrai*, Haemulidae) (top) and the hagfish (*Lachnolaimus maximus*, Labridae) (bottom) are two typical macroinvertivores. Large schools of sailor's choice were first observed at Looe Key Reef after it became a Sanctuary. The hagfish was a favorite spearfishing target that became more frequent after the Sanctuary was established.

Plate 7.13. The schoolmaster snapper (top), the most common snapper (Lutjanidae) observed in the Sanctuary, was frequently seen in schools around colonies of elkhorn coral (*Acropora palmata*) (bottom).

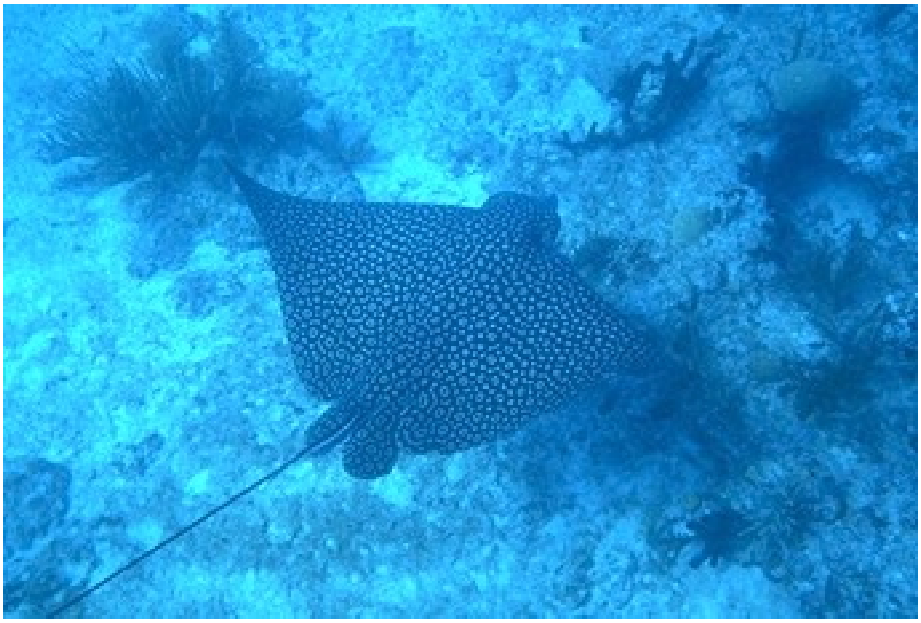

Plate 7.14. Two species that feed primarily on the larger macroinvertebrates on sand bottoms are the jolthead porgy (*Calamus bajonado*) (top) and the eagle ray (*Aetobatus narinari*) (bottom).

Plate 7.15. Moray eels and groupers are two small predators that feed on macroinvertebrates and fishes. Eels are more active at night and grouper more active during the day. Shown are a spotted moray (*Gymnothorax moringa*) being fed by a diver (top) and a graysby (*Epinephelus cruentatus*), the most common grouper at Looe Key Reef (bottom).

Plate 7.16. The bar jack (*Caranx ruber*) (top) and the yellowtail snapper (*Ocyurus chrysurus*) (bottom) are midwater fishes that feed primarily on plankton when small and on fishes when larger.

Plate 7.17. The great barracuda (*Sphyraena barracuda*) is a piscivorous predator that feeds on small fishes when medium in size (top) and large fishes when large in size (bottom). This is one of many species not seen in the Sanctuary as juveniles.

Plate 7.18. Adult tarpon (*Megalops atlanticus*) (top) are piscivourous predators frequently seen over reef areas in the Sanctuary. The Nassau grouper (*Epinephelus striatus*) (bottom) is a large grouper that feeds mostly on large invertebrates.

Plate 7.19. The bull shark (*Carcharhinus leucas*) is one of the largest predators in the Sanctuary. Although often caught in the Sanctuary at night they are rarely seen an the reef during the day.

Plate 7.20. Classifications of reef fishes into trophic categories is somewhat misleading because most reef fishes are opportunists and will eat almost anything available. A stoplight parrotfish, *Sparisoma viride*, is normally herbivorous but could be seen attacking and eating sick long-spined urchins (*Diadema antillarum*) (top) during an unusual sea urchin die off in the summer of 1983. Similar disease epidemics and winter cold spells have killed reef fishes in or around the Sanctuary. Dead fishes (bottom) in Cupon Bight, just north of the Sanctuary, killed by a severe January 1977