

Session 3. Summary

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The two papers presented in the session demonstrated that other important and potentially important resources are associated with seamounts. In the first paper, Grigg reported that precious corals may be found in the vicinity of seamounts and that the precious coral fishery can be considered in part a seamount fishery.

Commercial grades of precious coral are red and pink (*Corallium* spp.). Less valuable corals include gold, black, and bamboo. In the last 5 years, more than half of the world's supply of *Corallium* sp. has been harvested from grounds in the Emperor Seamounts at depths between 400 and 1,500 m. Recent discoveries of new precious coral grounds in the Mediterranean and off Hokkaido are also associated with seamounts or shallow banks.

In the second paper Alton dealt with fish and crab populations associated with Gulf of Alaska seamounts. These seamount populations were composed mainly of commercially valuable species that are part of the lower slope community of the continental shelves in the northeastern Pacific. Alton, however, found no evidence of recruitment of young fish to the seamount populations, that seamount-associated sablefish were large, mature fish that arrived from other regions, and that there was a low rate of emigration from the seamount populations.

Alton concluded from the surveys that despite high catches of crabs and sablefish from seamounts, the nature of the population and the limited habitat suggest that seamount populations can support only a limited fishery.

Discussion on the presentations brought out that coral tangle nets are about 40% efficient. Repeated passes of this type of gear break up coral and cause extensive damage to the grounds, which may require many years to recover.

In response to a question of aging coral, Grigg replied that growth rings can be used to determine age of mature coral. He noted that gonadal development may slow coral growth and thus ring formation. Immature coral, however, also shows evidence of growth rings, but it is not known why they occur. Grigg stated that for some species, male coral matures at age 2 and females at age 4.

Coral harvesting can also be done by the use of submersibles, but whether it is efficient to do so depends on economic considerations.

On a question of how mature sablefish find their way from their lower-slope habitat to the offshore seamounts, Alton speculated that sablefish migrate in midwater to reach them. The rationale for such speculation is that the seamount-associated sablefish are firm-fleshed, unlike some continental slope sablefish which inhabit deep water and have softer flesh. Furthermore, sablefish have been reported in catches of midwater trawls.

For hake caught by trawling over Alaskan seamounts, it was noted that they differed in size and age from those taken by trap fishermen off Oregon, indicating differential growth rates by area. Sablefish from the eastern Bering Sea as well as over the seamounts showed extensive horizontal and vertical distributions; therefore, even if the seamount stock of this species were harvested intensively, the effect of fishing would not be as severe as that for pelagic armorhead, which is closely associated with and dependent on the seamount habitat.

Further discussion pointed out that the sablefish resource in the North Pacific is not limiting, and the present fishing intensity is not likely to affect it. Any fishery developed for the seamount-associated sablefish, however, would need to be properly managed.