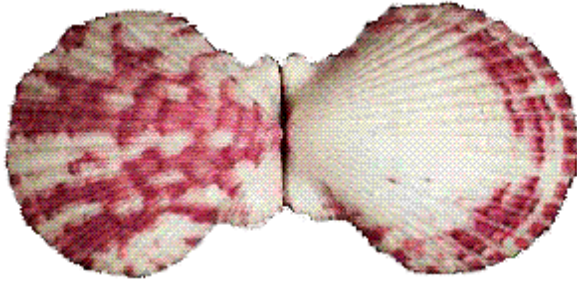


Calico scallop, *Argopecten gibbus*



Calico scallops are patchily distributed from Delaware Bay south into the Caribbean Sea north to about 20 degrees N latitude. Genetic and morphological similarities between Florida and North Carolina calico scallop populations and coastal current patterns suggest that larval dispersal from Florida may be an important source of North Carolina stocks (Krause *et al.* 1994). Calico scallops are generally found in waters ranging from about 30 to 1,300 feet deep but have been reported from shallower waters in Biscayne Bay (Coleman *et al.* 1993). Spawning occurs throughout the year but peaks in late fall and in the spring (Arnold 1995). Calico scallops are hermaphrodites that sequentially release sperm and eggs. In the laboratory, the pelagic larval phase lasts for 14–16 days after which larvae attach to hard substrate. Calico scallops can reach 0.06” shell height in two months and 0.7”–1.1” in three months (Allen 1979). Scallops reach a commercial size of 1.87”–2.10” shell height in six to eight months. Maximum life span is about 24 months.

Calico scallops may have similar feeding habits as the closely related bay scallops. Davis and Marshall (1961) reported that the bay scallop primarily fed on microflora such as detritus, bacteria, and organic matter. Predation is a major factor affecting survival during various phases of the calico scallop life cycle. Schwartz and Porter (1977) found that 22 species of macroinvertebrates and 24 species of fish fed on calico scallops. The invertebrates included sea stars, gastropod, mollusks, squid, octopus, and crabs. The fishes included sharks, rays, and bony fishes.

No landings of calico scallops were reported from Florida in 2005. The most recent landings date to 2003, and were 61,704 pounds. In 2003, landings were made exclusively in Brevard County on the Atlantic coast (Fig. 1). Total annual landings of calico scallops are highly variable due to extreme fluctuations in recruitment success, population size, and changes in market demand. For instance, no landings were reported in Florida during 1996 due to an apparent switch by the fishery to fishing for rock shrimp. The 2003 total landings of calico scallops were 95% lower than the average landings in the previous five years (1998–2002) and were 99% lower than the historical average landings (1982–2003; Fig. 2). At its highest peak in 1984, the Atlantic coast fishery reported landings of more than 40 million pounds (Fig. 2). Since 1989, the statewide landings have ranged from zero to about 7.0 million pounds. Atlantic coast commercial catch rates were highly variable with occasional peaks, e.g., 1998 (Fig. 3). Calico scallops are infrequently landed along the gulf coast of Florida except in “boom” years, e.g., 1994, 1998, 1999 (Fig. 2, Appendix A).

Successful calico scallop recruitment is highly variable. Factors influencing year-class success probably include coastal upwelling, which drives nutrient rich water to the surface layers and may aid in retaining larvae over favorable habitat. Biological impacts on year-class strength

are unknown, but parasitic infestations have caused mass mortalities (Arnold 1995). With these resource dynamics, the fishery is a "boom-or-bust" type where large annual harvests can be followed by years with little to no harvest. The present condition of stock in the south Atlantic region is unknown because of the large fluctuations in calico scallop abundance (South Atlantic Fishery Management Council and Gulf of Mexico Fishery Management Council 1981). Given the level of fluctuations in abundance and limited data, no MSY have been specified for calico scallop in the management plan. It is believed that several scallop beds are not harvested each year because of the vastness of the scallop beds on the grounds. Commercial fishing catch rate may regulate the exploitation rate. When catch rates drop below a profitable level, harvesting ceases, leaving the remaining scallops to contribute to stock recruitment (South Atlantic Fishery Management Council and Gulf of Mexico Fishery Management Council 1981). No formal stock assessment of the Florida's calico scallop stocks is available at the present time.

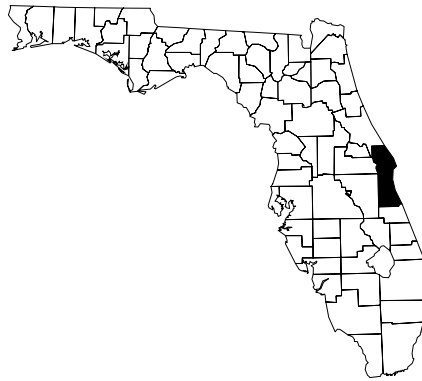


Figure 1. Geographic distribution of commercial landings of calico scallops during 2003, the last year landings were made.

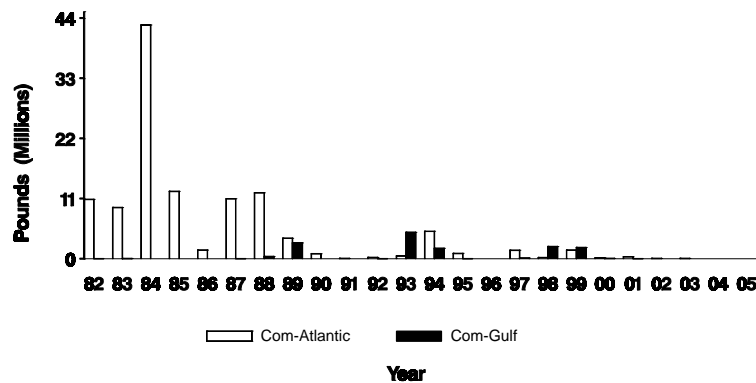


Figure 2. Total annual commercial landings of calico scallop on the Atlantic and Gulf coasts of Florida, 1982–2005. There were no reported landings made during 2004 and 2005.

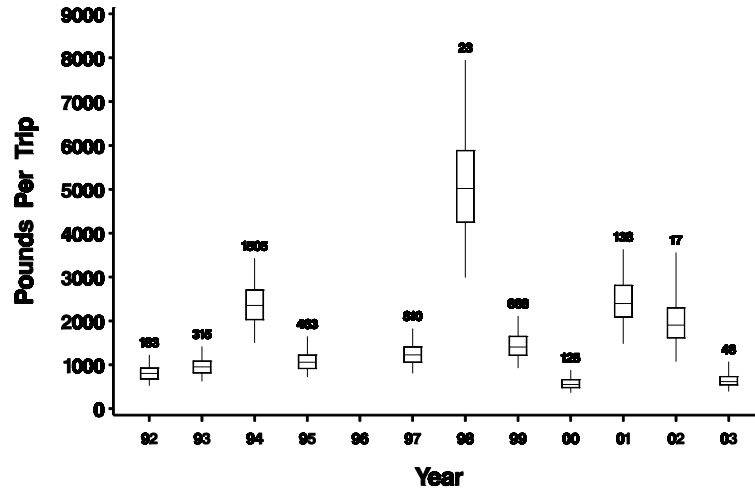


Figure 3. Annual standardized commercial catch rates (pounds) for calico scallop on the Atlantic coast of Florida, 1992–2003. There were no catches reported during 2004 and 2005