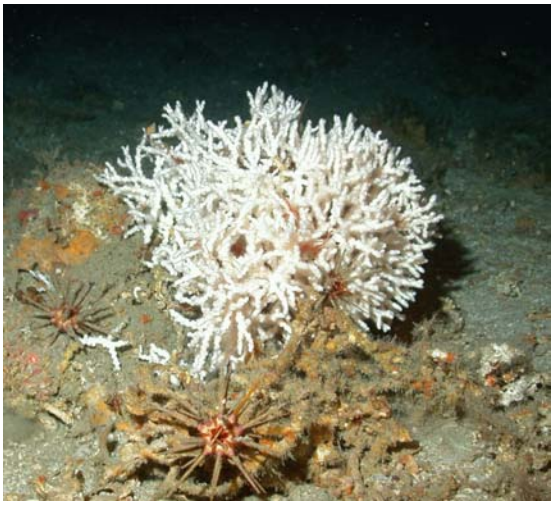
Common Name: **Ivory bush coral**
Scientific Name: *Oculina varicosa* **(Lesueur, 1821)**
Area of Concern: Oculina Banks (east Florida)
Year First Listed as a "Species of Concern": 2004



Brief Species Description:

Colonies are arborescent, with highly clumped, irregular dendritic branches; branches average 6 mm in diameter and colonies can be 1.5 m tall. Corallites are distributed in a spiral around the branches, and each corallite is approximately 2-3 mm in diameter. Deep water colonies are lavender to white in color and have thinly tapered branches with widely spaced corallites. Colonies of *O. varicosa* are found to depths of 152 m depth on limestone rubble, low-relief limestone outcrops, and high-relief, steeply sloping prominences. Colonies are semi-isolated, patchy and low-growing in shallow water, or they form larger, massive coalescing aggregates (thickets) with substantial topographic relief in 50-100m depth. Shallow water colonies are golden to brown due to symbiotic algae, and have shorter, stout branches with closely-spaced corallites. However, the taxonomy of the *Oculina* genus is unclear and there is debate whether the deep water and shallow-water forms are the same species.

Rationale for "Species of Concern" Listing:

Factors for decline:

"Species of Concern" listing rationale is based on well-documented declines in the Oculina Banks area. Banks containing partially dead colonies of *Oculina* were first observed in the late 1970s by Reed (1980)[1]. In 1980, over 50 sites between 70-100 m were identified with discrete populations of *Oculina*, while 9 sites had massive thickets of contiguous colonies, and 5 sites had extensive banks of *Oculina* thickets; only 15 out of 135 hard ground sites examined did not contain live *Oculina* (Reed, 1980). Extensive submersible surveys performed from 1995-1997 indicate that extensive habitat damage existed throughout the reserve and control areas, and only one site, Jeff's reef, still contained extensive thickets.

The known and documented threat in the Oculina Banks area is damage from mechanical fishing gear, including dredges, bottom long lines, trawl nets and anchors. In the 1970s fisheries efforts targeted bottom reef fish using roller trawls; although these trawls are subject to damage if used in high relief areas, they cause significant damage to the habitat and coral species on hard bottoms. Other sources of mortality may occur, but have not been documented in the deep Oculina Banks habitat. Colonies may be influenced by bottom currents, upwelling of cold-water masses, and red tides.

Little information is available concerning *O.varicosa* population status and trends in other areas.

Demographic and Diversity Concerns:

This documented species decline is coupled with a complete lack of sexual recruitment in the Oculina Banks habitat as well as adjacent shallow water habitats in central Florida. Asexual fragmentation may provide for the establishment of some new colonies but habitat alteration from trawl damage yields a rubble substrate which is not conducive to coral recruitment of any sort.

Status Reviews/Research Completed or Underway:

Current research is focusing on clarifying the uncertain taxonomy of this species. Given that the species concern is based on population trends and habitat alteration in the Oculina Banks region, it is important to determine if this population in fact represents a separate species from the widely distributed shallow water forms with other names (*O. diffusa*, *O.arbuscula*, *O. robusta*, etc.). Nuclear genetic markers are being developed as a means to determine rigorous species boundaries for the *Oculina* genus.

[1] Reed JK (1980) Distribution and structure of deep-water *Oculina varicosa* coral reefs off central eastern Florida. Bull Mar Sci 30(3): 667-677

For further information on this Species of Concern, or on the Species of Concern Program in general, please contact Ms. Marta Nammack, NMFS, Office of Protected Resources, 1315 East West Highway, Silver Spring, MD 20910, (301) 713-1401, Marta.Nammack@noaa.gov *or Dr. Margaret Miller, NMFS Southeast Science Center, 75 Virginia Beach Dr. Miami FL 33149 (305)361-4561* margaret.w.miller@noaa.gov*, or Jennifer Jacukiewicz, NMFS, Southeast Region, Protected Resources Division, 9721 Executive Center Drive N., St. Petersburg, FL 33702, (727)570-5312,* Jennifer.Jacukiewicz@noaa.gov.