

**Letter report to Maryland Department of Natural Resources Secretary Griffin,
concerning dredge scars in Maryland coastal bay SAV beds:**

December 12, 1997

The Honorable John R. Griffin, Secretary
Maryland Department of Natural Resources
Tawes State Office Building
Annapolis, MD 21401

Dear Secretary Griffin:

Over the last decade, public attention has been focused on the importance of submerged aquatic vegetation (SAV) as a barometer of the health of Chesapeake Bay and as a critical nursery for blue crabs and other commercially and recreationally important species. On a worldwide basis these habitats are considered one of the most productive in coastal areas. Efforts are underway in Chesapeake Bay, and many other areas of the world, to improve water quality necessary for the expansion of SAV and to replant SAV in selected areas where water quality now appears adequate to support SAV growth.

Our intent here is to report unprecedented damage to SAV beds in Maryland's coastal bays which we believe is attributable to activities of commercial clam harvesting by hydraulic escalators. Damage which is documented in aerial photographs ([see accompanying photographs](#)) obtained annually for mapping SAV is of such a significant nature that we believe it may impact the long term recovery of SAV in Chincoteague and Sinepuxent bays. SAV's are at their highest levels of abundance since 1933 when they were completely eliminated in the coastal bays by a combination of disease and a 1933 hurricane. Recovery of SAV was initially slow but has been rapidly spreading during the period of the annual survey which started in the coastal bays in 1986.

Although SAV bed scarring was noted in 1996, the marked increase in severity and extent of scarring in 1997 (almost 10 fold increase) is of great concern. It is our opinion that this issue must be dealt with immediately before further damage is done to remaining SAV beds in this region this winter.

[Figure 1](#) documents the damage to SAV beds in both 1996 and 1997, as a measure of scar area relative to total SAV. In addition, we scored the intensity of scarring by comparing the level of damage to a modified density scale which has been used to quantify the density of SAV. Four categories of scar intensity were used: very sparse (class 1, 0-10% of the SAV bed scarred), sparse (class 2, 10-40% of the SAV bed scarred), moderate (class 3, 40-70% of the SAV bed scarred), and dense (class 4, 70-100% of the SAV bed scarred). The extent of

the scarring has increased approximately 10 fold from 1996 to 1997. In 1996, 131 acres of SAV had scarring, while in 1997, 1,255 acres were scarred! In 1996, no scarring was classified as dense and only 17 acres were classified as moderate. In 1997, 96 acres were classified as dense and 143 acres classified as moderate.

We believe the damage we have observed in these SAV beds in the coastal bays is attributable to commercial clamming using hydraulic escalators for the following reasons:

1. The type of bed scarring which we are attributing to hydraulic escalators is only found in SAV beds on or north of the Virginia Maryland border. Virginia does not allow hydraulic escalators.
2. There is no evidence that any other ongoing activity in Chincoteague Bay has caused as much damage in one year as we are observing. Recreational boating has been known to create propeller scars in SAV beds but there is no reason to suspect that recreational boating has increased exponentially from 1996 to 1997.
3. The widths of the scars are approximately 3 to 4.5 ft. This is similar to that of a hydraulic dredge head. Recreational boats will generally not create a scar of this width.
4. The length of the scars are hundreds of yards long and run along bed edges as well as across entire beds. We would not expect recreational boaters to continue with their motors in a down position for such long distances. In addition, there are literally hundreds of scars in some areas.

We believe this photographic record is graphic evidence that one type of commercial dredging activity is very detrimental to SAV beds in the coastal bays and the impacts are rapidly increasing. We urge you to take immediate action to prevent further damage to SAV beds in this region. Lack of action now will most likely lead to further damage to the existing SAV beds. We would be happy to work with your staff in whatever capacity necessary to insure adequate protection.

Sincerely,

Robert J. Orth, Ph.D.

Kenneth A. Moore, Ph.D.

1:24,000 Scale Aerial Photography Documenting Dredge Scars in the Maryland Coastal Bays

SAV Photo 115-26, taken 5/24/97



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SAV Photo 116-10, taken 5/24/97



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SAV Photo 116-15, taken 5/24/97



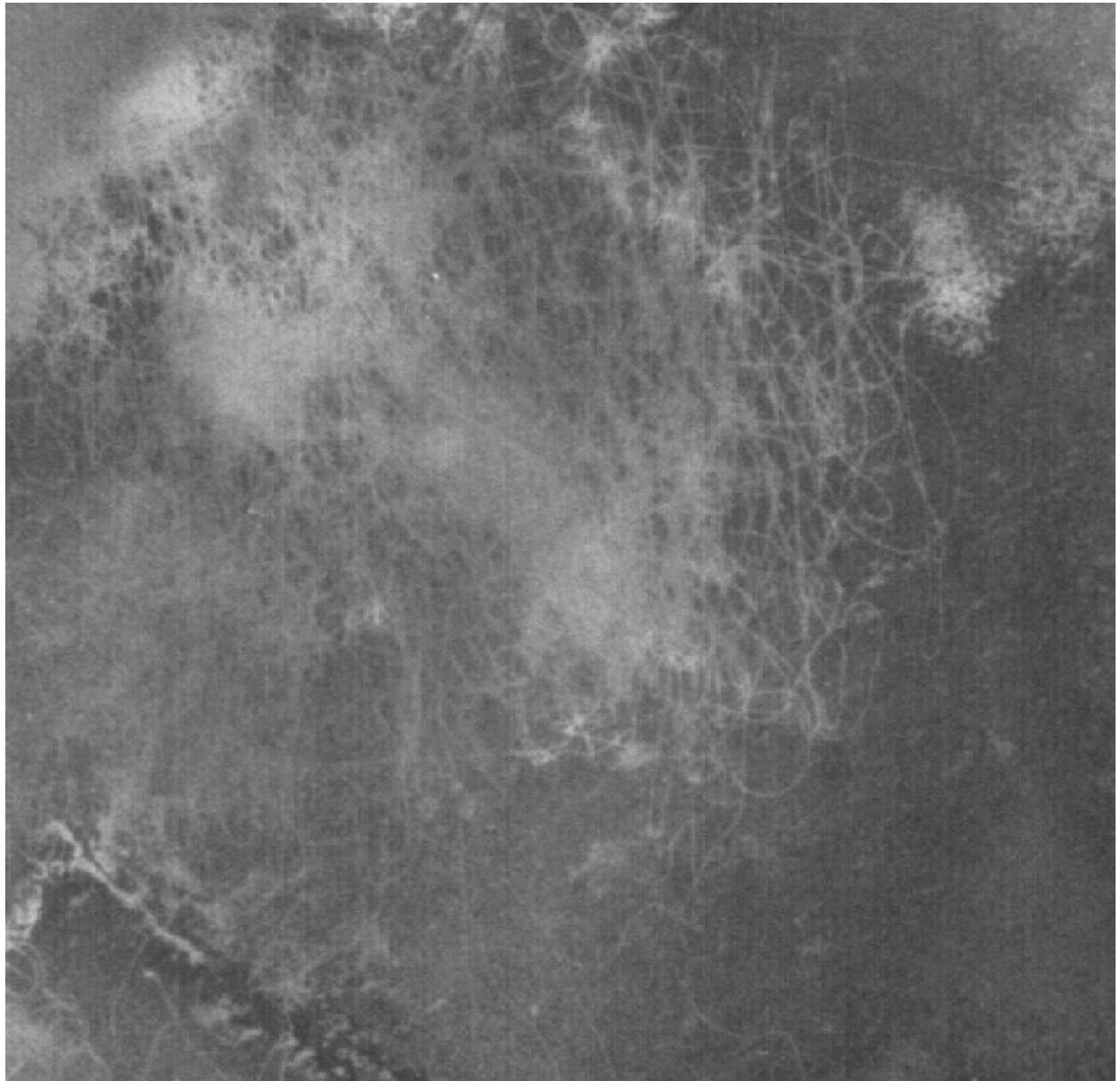
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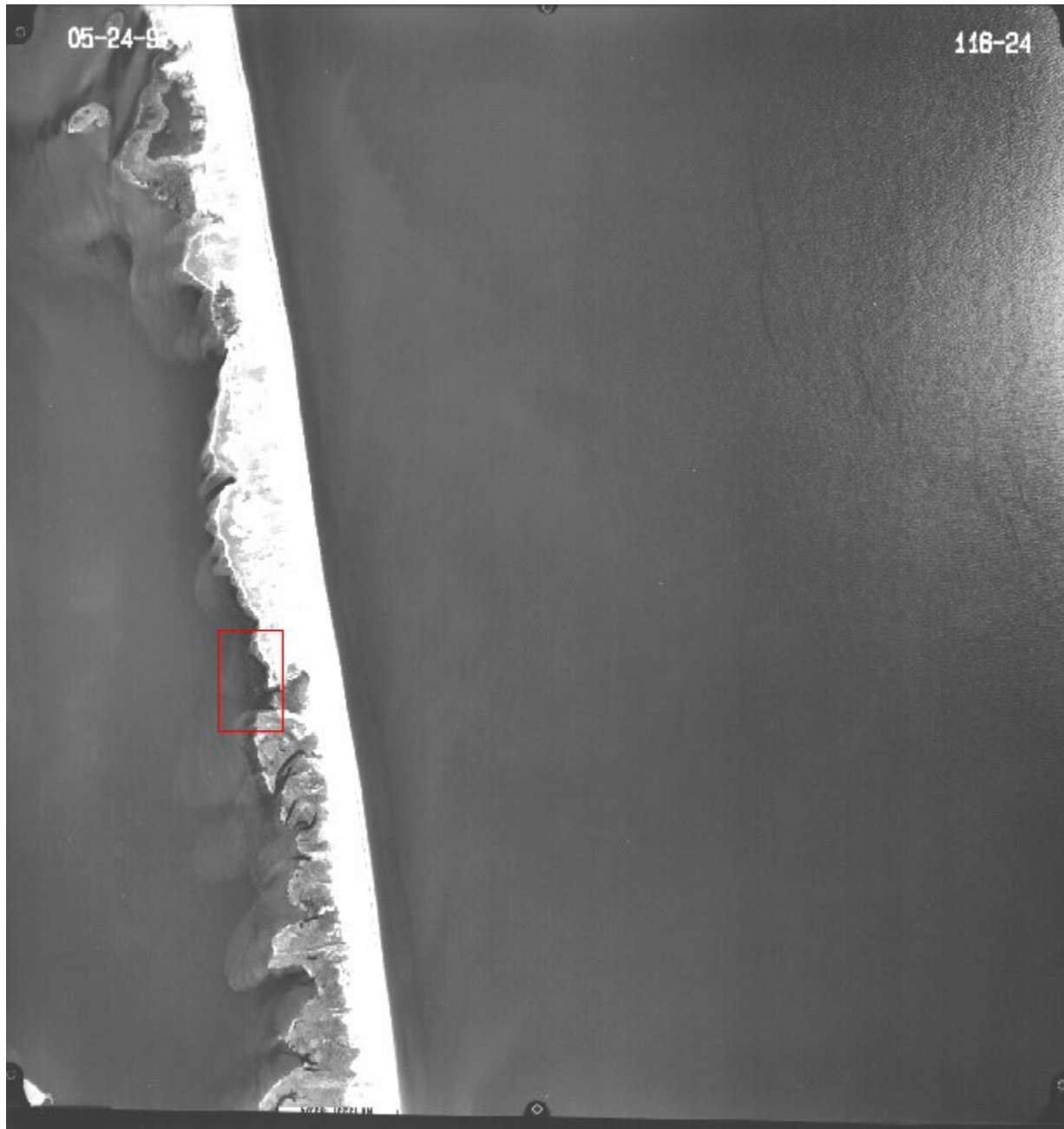
SAV Photo 116-17, taken 5/24/97



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SAV Photo 116-24, taken 5/24/97



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