

1986 Bald Eagle Breeding Success in the Chesapeake Bay Region

Jackson M. Abbott Coordinator, Ches. Bay Region Bald Eagle Nesting Survey

The eagles are storming back! Our bald eagle breeding population crashed during the 1950s, bottomed out in the 1960s and began a slow recovery after DDT was banned in 1973. The accumulation of DDT in the body of an eagle eventually would kill it but before that event it adversely affected the ability of the female to lay normal eggs: eggs were often very thin-shelled and broke when sat on or, if capable of being incubated, the embryo would develop but die before hatching. See Table on the reverse for data showing the rapid recovery over the past eight years.

The number of eaglets produced per rechecked active nest has greatly improved from 0.2 in 1962 to 0.6 in 1975, 1.0 in 1981 and 1.4 in 1986, nearly back to the pre-DDT norm of 1.8 obtained in 1936. One nest in Kent County, Maryland produced four (4) young in 1986! This is the first 4 egg/young clutch reported since 1935.

The bald eagle population center of abundance remains in S. Dorchester County, Md. where 13 active nests in 1986 produced 28 young, an average of 2.1 per active nest (there were no abandonments). In 2nd place was Kent County, Md with 9 active nests, each of which was productive for a total of 16 young. Tied for 3rd were Richmond County, Virginia and Charles County, Md, each with 8 active nests. None were abandoned in Charles County (on the Potomac) and 15 young were produced. Four were abandoned in Richmond County (on the Rappahannock) and the remaining 4 had 8 yng.

Delaware, which had 4 active nests (4 young produced) in 1985, had only 2 active nests in 1986 but a total of 5 young. A 3rd pair in Delaware built a nest in March but did not lay eggs.

For the 5th successive year a pair of eagles nesting on the South Fork of the Potomac in W. Virginia had young: their first triplets! The pair first found in 1985 nesting at the Kerr Reservoir in south-central Virginia had an active nest in February but abandoned it in March because of logging activity near the nest tree.

Several ancestral nest sites abandoned for 10+ years were reactivated by new pairs in 1986. For the first year since 1962 a pair built a nest at a former nest site on Tank Creek, Stafford County, Va. Another reactivated site last active in 1962 was on the Flowerdew Hundred estate on the James River. Another on the James River was on Jamestown Island where the last active nest was in March 1963 when an adult was found dying with severe tremors under the nest tree: cause of death was diagnosed through autopsy as DDT. In Maryland a pair raised 2 young on Conn Isld in the Potomac at Great Falls Park; this site was last used by nesting eagles in the mid 1950s. At Wade's Bay in Charles County a pair raised 1 eaglet at a site last active in 1962. Just off the end of an active jet aircraft runway at the Patuxent Naval Air Station a pair built a nest and raised a young at a site last known to have been used by eagles in 1936, at which time there was no aircraft runway there. At Calvert Cliffs State Park in Calvert County one young was raised at a site last active in 1977. Just south of the Conowingo Dam on the Susquehanna River in Harford County a pair renested at a site last active in 1962. Near the Veteran's Hospital at Perryville, Cecil County, a pair renested within a mile of a nest site last active in 1967. At the Blackwater National Wildlife Refuge, within $\frac{1}{4}$ mile of the observation tower, a pair raised two young at a site last active in 1972. A new nest was found near Penknife Point in Dorchester County on the Nanticoke River which was last used by nesting eagles in 1977.

In 1985 I reported on an adult bald eagle found dead on the ground near its nest tree in Henrico County, Virginia; the nest contained 2 live and 1 dead eaglets and pigeon remains. It was speculated that the dead adult & young had ingested poisoned grain from the pigeons. Subsequent analysis by the US Fish & Wildlife Svc found that death was caused by the potent insecticide carbofuran which is used country-wide on corn, alfalfa, rice, tobacco and sugar cane. This compound has been reported as the cause of death to waterfowl, eagles, hawks, owls, pheasants, pigeons, doves and some mammals. Apparently we will continue to subject our environment and wildlife to chemical killers in one form or another until we perfect the propagation and release of natural enemies to insect pests.

Breeding Success of Chesapeake Bay Bald Eagles - selected years

Year:	1936	1962	1970	1975	1977	1979	1980	1981	1982	1983	1984	1985	1986
% of area surveyed:	25	50	75	80	90	95	95	95	95	95	95	95	95
Active nests: Found/rechecked:													
Delaware	4/4	1/0	2/2	1/1	2/2	2/2	2/2	3/3	4/4	4/4	3/3	4/4	2/2
Maryland	28/18	26/17	27/25	41/41	44/44	47/47	46/45	50/50	56/55	55/54	55/53	60/59	65/65
Virginia	16/15	33/20	26/24	33/33	31/31	36/36	36/36	40/40	45/45	52/51	60/60	65/65	66/66
Total	48/37	60/37	55/51	80/80	77/77	85/85	84/83	93/93	105/104	111/109	118/116	129/128	133/133
Rechecked active nests: abandoned/hatching young -													
Delaware	0/4	-/-	1/1	1/0	1/1	0/2	1/1	1/2	1/3	1/3	0/3	1/3	0/2
Maryland	5/13	16/1	15/10	17/19	16/27	21/26	20/25	18/32	20/35	13/40	13/40	16/43	8/57
Virginia	1/14	16/4	17/6	24/9	16/17	20/16	13/23	13/27	16/29	18/33	23/37	16/49	23/43
Total	6*/31	32/5	33/17	47/33	33/45	41/44	34/49	32/61	37/67	32/76	36/80	33/95	31/102
Number of eaglets hatched/fledged -													
Delaware	8/8	-/-	1/1	0/0	1/1	2/2	2/2	3/3	5/3	4/4	3/2	4/3	3/3
Maryland	26/25	1/1	13/13	36/36	47/45	41/38	35/35	53/51	57/56	60/57	71/69	80/77	104/102#
Virginia	33/31	6/6	8/8	10/10	23/22	23/22	35/35	41/41	44/40	57/51	62/59	92/85	83/83
Total	67/64	7/7	22/22	46/46	71/68	66/62	72/72	97/95	106/99	121/112	136/130	176/165	190/188
Number of eaglets banded -													
Delaware	6				0	2	2	3	3	4	2	3	0
Maryland	6	None between 1936 & 1977				24	35	30	41	44	47	60	83
Virginia	14				13	19	31	32	35	44	47	71	66
Total	26				37	56	63	76	82	95	109	137	149
Nest sites with adults present but eggs not laid -													
Delaware	0	1	0	0	2	1	1	1	0	0	1	0	2
Maryland	3	3	2	3	3	8	12	4	5	6	6	4	9
Virginia	1	4	5	4	6	9	5	10	5	4	2	1	2
Total	4	8	7	7	11	18	18	15	10	10	9	5	13

The 1936 survey was done by Bryant Tyrrell for the National Audubon Society and observations were from the ground and from climbing to the nests to ascertain their contents and band the young. Subsequent surveys have been from US Army UH-1 helicopters & pilots plus Army reserve birder/observers through 1966, then US Fish & Wildlife planes & pilots with various observers, supplemented by rented planes and pilots in southern Virginia.

*Eggs from 3 nests robbed by oologists; one nest blew down & one was abandoned due to farming activity.

A nest in Md had 4 young! - the first bald eagle nest in this region w/4 young since 1935.

Bald Eagle nesting success - Chas. Bay Region - 1985-1986

STATE & COUNTY	ACTIVE NESTS FOUND:						NO. OF YOUNG--				INACTIVE NEST SITES w/ADULTS PRESENT	REMARKS	
	TOTAL		ABANDONED		HATCHING YOUNG		HATCHED		BANDS				DIED OR DISAPPEARED
	1985	1986	1985	1986	1985	1986	1985	1986	1985	1986			
NEW JERSEY													
CUMBERLAND	1	1	0	0	1	1	1	1	1	1	0	0	
E. PENNA.													
YORK	0	0	-	-	-	-	-	-	-	-	-	-	old nest site
LANCASTER	0	0	-	-	-	-	-	-	-	-	-	-	
DELAWARE													
KENT	1	0	1	-	0	-	0	-	0	-	-	-	← Nest built in March, No eggs laid
SUSSEX	3	2	0	0	3	2	4	3	3	5	1	0	← 1 egg collected for Nest w/2 Y
WEST VIRGINIA													
HARDY	1	1	0	0	1	1	2	3	2	3	0	0	
S. POTOMAC RIVER													
MARYLAND													
POTOMAC RIVER													
MONTGOMERY	0	1	-	0	-	1	-	2	-	0	-	0	0
PRINCE GEORGE	1	1	0	0	1	1	3	2	3	0	0	0	0
CHARLES	9	8	5	0	4	8	5	15	3	13	0	0	2 eggs collected '85
ST. MARY'S	2	2	0	0	2	2	3	2	3	2	0	0	← logging activity
PATUXENT RIVER													
PRINCE GEORGE	1	1	0	1	1	0	2	-	2	-	-	-	-
CALVERT	1	2	1	1	-	1	-	1	-	0	0	1	-
ST. MARY'S	1	2	1	0	-	2	-	2	-	2	0	0	-
CHARLES	0	1	0	0	-	1	-	3	-	3	-	0	-
CHESAPEAKE BAY, W.													
ANNE ARUNDEL	2	3	1 (coon)	1	1	2	2	4	2	4	0	0	1
CALVERT	1	2	1	0	0	2	-	2	-	2	-	-	-
ST. MARY'S	0	?	-	?	-	?	-	?	-	0	-	-	← Navy denied over-flights in '86
CHES. BAY, NORTH													
HARFORD	4	4	2	2	2	2	3	5	2	2	0	0	2
CECIL	1	3	0	2	1	1	2	1	2	0	0	0	0
CHES. BAY, EAST													
KENT	9	9	2	0	7	9	13	16*	11	14	0	0	1
QUEEN ANNES	2	3	1	0	1	3	2	4	0	3	0	1	0
TALBOT	5	6	0	1	5	5	11	10	6	9	0	0	1
CAROLINE	0	1	0	0	1	1	-	1	-	0	-	-	-
DORCHESTER	17	13	3*	0	14	13	27	28	24	25	3	0	0
SOMERSET	2	1	0	0	2	1	2	2	0	2	-	-	-
WICOMICO	1	1	0	0	1	1	2	2	2	2	-	-	-
WORCESTER	1	1	0	0	1	1	3	2	3	0	-	-	-
MD. TOTALS	60	65	17	8	43	57	80	104	63	83	3	2	6+9
DEL. TOTALS	4	2	1	0	3	2	4	3	3	-	1	-	-
VA. TOTALS	65	66	16	23	49	43	93	83	71	66	7	0	0
MD/DEL/VA TOTALS	129	133	34	31	95	102	177	190	137	149	11	2	6

* 1 Kent Co. nest had 4 young in '86!
This is the first 4-yr or 4-bgg nest
since 1935!

STATE & COUNTY	ACTIVE NESTS FOUND:						NO. OF YOUNG--						INACTIVE NEST SITES W/ADULTS PRESENT		REMARKS	
	TOTAL		ABANDONED		HATCHING YOUNG		HATCHED		BANDS		DIED OR DISAPPEARED		1985	1986		
	1985	1986	1985	1986	1985	1986	1985	1986	1985	1986	1985	1986				
VIRGINIA																
HALIFAX	1	1	0	1	1	0	2	0	0	0	1	—	0	0	Logging in '86	
POTOMAC RIVER																
LOUDON	0	0	—	—	—	—	—	—	—	—	—	—	—	—	← inactive nest here	
FAIRFAX	1	1	1	0	0	1	—	2	—	2	—	—	0	0		
PRINCE WM.	2	1	1 (wind)	0	1	1	2	1	0	1	—	—	—	—		
STAFFORD	3	4	1 (post)	3	3	1	5	14?	4	0	—	—	—	—	Bags collected for 1 nest in '86	
KING GEORGE	7	6	4	2	3	4	6	8	6	8	—	0	—	—	1 active '85 nest site not visited in '86	
NESTMORELAND	9	7	3	2 (wind)	6	5	12	11	12	11	—	0	—	—		
NORTHUMBOLD.	2	2	1	2	1	0	2	0	2	0	—	0	—	—		
RAPPAHANNOCK RIV																
CAROLINE	1	1	1 (wind)	1	0	0	—	—	—	—	—	—	—	—		
KING GEORGE	1	1	0	0	1	0	1	3	1	3	—	—	—	—	1 Y to NC in '86	
WESTM'LD	2	2	0	0	2	2	2	2	1*	1	—	—	—	—	rebanders went to wrong nest in '85	
RICHMOND	8	8	0	4 (wind)	8	4	13	8	13	6	—	—	—	—		
LANCASTER	1	1	0	1	0	1	10	5	7	4	—	—	—	—		
MIDDLESEX	4	4	0	0	4	3	3	5	3	0	—	—	—	—		
ESSEX	1	1	0	0	1	1	3	3	3	0	—	—	—	—		
PIANKA TANK																
GLOUCESTER	1	1	0	0	1	1	2	2	1	2	—	—	—	—		
MIDDLESEX	1	1	0	0	1	1	1	1	1	0	—	—	—	—		
MATTAPONI RIVER																
KING WILLIAM	2	2	0	0	2	2	6	6	5	6	—	—	—	—		
PAMUNKEY RIV.																
NEW KENT	2	2	0	1	2	1	2	2	1	0	0	0	—	—		
KING WILLIAM	1	1	1	0	0	1	—	2	—	2	—	—	—	—	← logging prevented '86 nesting	
YORK RIVER																
NEW KENT	1	1	1	1	0	0	—	—	—	—	—	—	—	—		
GLOUCESTER	1	1	0	0	1	1	1	3	1	1	—	—	—	—	← 1 Y to NC in '86; 1 Y to old to band	
JAMES CITY	1	1	0	1	1	0	3	—	2	—	1*	—	—	—	* 1 dead Y being eaten by 2 siblings	
YORK	0	1	1	0	—	1	—	2	—	2	—	—	—	—		
JAMES RIVER																
HENRICO	1	1	0	0	1	1	3	2	2	2	1	0	—	—		
CHAS. CITY	1	1	0	0	1	1	3	2	2	2	—	—	—	—		
PRINCE GEORGE	1	2	0	1	1	1	3	2	0	0	0	0	—	—		
SURRY	3	3	1	1 (wind)	2	2	4	4	3	4	1	0	—	—		
JAMES CITY	0	1	—	1	—	—	—	—	—	—	—	—	—	—		
ISLE of WIGHT	0	1	—	0	—	1	—	1	—	0	—	—	—	—		
SUFFOLK	0	1	—	0	—	1	—	1+?	—	0	—	—	—	—		
CHICKANOMY RIV																
CHAS. CITY	1	1	0	0	1	1	1	2	1	2	—	—	—	—		
JAMES CITY	2	2	0	0	2	2	3	5	3	5	0	0	—	—		
COASTAL																
ACCOMAC	1	0	0	1	1	0	2	—	0	—	0	—	—	1	logging to nest tree	
NORTHAMPTON	2	2	0	0	2	2	4	2	2	2	0	0	—	—		
TOTALS	65	66	16	23	49	43	93	83	71	66	7	0	0	2		