

U.S. Military Working Dogs with Vietnam Service: Definition and Characteristics of the Cohort. Hayes, H.M., et al. In press: Military Medicine (Nov, 1994).

TABLE I

UNIQUELY IDENTIFIED U.S. PROCURED MILITARY WORKING DOGS THAT WERE TRAINED AND SERVED IN THE REPUBLIC OF VIETNAM<sup>a</sup>

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Year <sup>b</sup>	Served with U.S. Forces		Served with RVN Armed Forces <sup>c</sup>	
	Service and disposition in RVN	Service in RVN, elsewhere	MWDs sent direct from the U.S.	Transferred from U.S. Armed Forces serving in RVN
1965	14	0	0	0
1966	155	2	68	0
1967	187	14	87	0
1968	400	29	85	0
1969	527	103	249	9
1970	456	25	147	169
1971	355	22	0	57
1972	272	57	0	88
1973	23	37	0	68
1974-1980	na	190	na	na
<b>Total</b>	<b>2,389</b>	<b>479</b>	<b>636</b>	<b>391</b>

<sup>a</sup>RVN = Republic of Vietnam; MWD = military working dog; na = not applicable.

<sup>b</sup>Year determined by date of last recorded available information.

<sup>c</sup>MWDs were known to be alive in the year noted.

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TABLE 11

OUTCOME OF 2,389 TRAINED U.S. MILITARY WORKING DOGS THAT SERVED EXCLUSIVELY WITH U.S. FORCES AND ARE NOT KNOWN TO HAVE BEEN TRANSFERRED OUT OF VIETNAM

Armed Forces Institute of Pathology histopathological necropsy review

Year	No (N=1,078)					Yes (1,311)			
	Fate unkn <sup>a</sup>	Losses due to hostile action <sup>b</sup>	Died of GDV <sup>c</sup>	Died of heat stroke	Death due to other causes <sup>d</sup>	Losses due to hostile action <sup>e</sup>	Died of GDV	Died of heat stroke	Death due to other causes
1965	0	0	0	4	8	0	0	0	2
1966	108	7	3	4	29	0	0	0	4
1967	88	28	0	11	56	0	0	0	4
1968	107	56	4	12	82	7	4	6	122
1969	42	60	3	15	55	11	2	9	330
1970	41	56	3	6	36	16	9	8	281
1971	28	18	1	0	16	9	1	2	280
1972	66	0	3	0	17	1	2	1	182
1973	3	0	0	0	2	0	0	0	18
Total	483	225	17	52	301	44	18	26	1,223

<sup>a</sup>Includes 19 MWDs missing in action.

<sup>b</sup>Composed of 221 killed in action and 4 wounded in action that died due to injury.

<sup>c</sup>GDV = Gastric dilatation-volvulus syndrome.

<sup>d</sup>Includes deaths due to natural or unknown causes and euthanasia.

<sup>e</sup>Composed of 29 killed in action and 15 wounded in action that died due to injury.

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**TABLE III**

**LOSSES DUE TO HOSTILE ACTION<sup>a</sup> BY CORPS TACTICAL ZONE AMONG  
COMBINED U.S. ARMY, NAVY, AND MARINE CORPS MILITARY WORKING DOGS, 1968-1972**

Year	I		II		III		IV		TOTAL <sup>b</sup>	
	CORPS	%	CORPS	%	CORPS	%	CORPS	%		%
1968	24/356	6.7	7/328	2.1	15/483	3.1	7/101	6.9	59/1268	4.7
1969	28/314	8.9	17/285	6.0	18/422	4.3	4/61	6.6	68/1082	6.3
1970	40/405	9.9	13/338	3.8	12/363	3.3	0/18	0	72/1124	6.4
1971	21/234	9.0	3/149	2.0	2/127	1.6	0/13	0	27/523	5.2
1972	1/10	10.0	0/22	0	0/101	0	0/9	0	1/142	0.7
<b>SUMMARY</b>	<b>114/1319</b>	<b>8.6</b>	<b>40/1122</b>	<b>3.6</b>	<b>47/1496</b>	<b>3.1</b>	<b>11/202</b>	<b>5.4</b>		

<sup>a</sup>Killed in action or wounded in action and died due to injury (including euthanasia); 1968 denominator based on mean annual authorized unit strength by Corps area;<sup>20</sup> 1969-1972 denominators based on mean annual unit strength determined from blood sample statistics.<sup>4</sup>

<sup>b</sup>Includes 15 killed in action whose Corps service area at death is unknown.

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**TABLE IV**  
**DISTRIBUTION BY YEAR AND MEAN AGE**  
**OF U.S. MILITARY WORKING DOGS<sup>a</sup> THAT WERE KILLED IN ACTION**  
**OR DIED FROM HEAT PROSTRATION IN THE REPUBLIC OF VIETNAM**

Year	Killed in action or wounded in action and died of injuries			Died of heat prostration		
	N	Mean age	Standard error <sup>b</sup>	N	Mean age	Standard error
1965	0			4	5.3	(1.03)
1966	7	2.7	(0.57)	4	5.3	(1.38)
1967	28	2.5	(0.17)	11	2.4	(0.15)
1968	63	3.6	(0.19)	18	3.5	(0.29)
1969	71	3.3	(0.16)	24	3.3	(0.23)
1970	72	3.9	(0.14)	14	4.0	(0.39)
1971	27	4.0	(0.22)	2	5.0	(1.00)
1972	1	4.0		1	8.0	
1973	0			0		
<b>TOTAL</b>	<b>269</b>	<b>3.5</b>	<b>(0.08)</b>	<b>78</b>	<b>3.6</b>	<b>(0.18)</b>

<sup>a</sup>Includes those serving with U.S. Army, Navy, Air Force, and Marine Corps units.

<sup>b</sup>Standard error of the mean.

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**TABLE V**  
**OUTCOME OF 479 U.S. MILITARY WORKING DOGS THAT SERVED IN VIETNAM AND ARE KNOWN TO HAVE ENDED THEIR MILITARY SERVICE ELSEWHERE**

Armed Forces Institute of Pathology histopathological necropsy review

Year	No (N=127)					Yes (N=352)		
	Gave away	Fate unkn	Died of GDV <sup>a</sup>	Died of heat stroke	Death due to other reasons <sup>b</sup>	Died of GDV	Died of heat stroke	Death due to other reasons
1965	0	0	0	0	0	0	0	0
1966	0	0	0	0	2	0	0	0
1967	0	0	0	1	1	1	0	11
1968	0	0	0	1	7	0	1	20
1969	0	39 <sup>c</sup>	0	0	10	1	1	52
1970	0	0	0	0	2	0	0	23
1971	5	0	0	1	1	0	0	15
1972	10	9	0	0	2	0	0	36
1973	7	0	1	0	6	0	0	23
1974	2	1	0	0	1	3	0	23
1975	1	0	1	0	3	2	0	31
1976	0	0	0	0	3	0	0	46
1977	0	0	0	0	2	1	0	28
1978	0	0	0	0	3	0	1	17
1979	0	0	0	0	2	0	0	13
1980	0	0	0	0	3	0	0	3
Total	25	49	2	3	48	8	3	341

<sup>a</sup>GDV - Gastric dilatation-volvulus syndrome.

<sup>b</sup>Includes deaths due to natural or unknown causes and euthanasia.

<sup>c</sup>Represents 39 of 124 military working dogs (MWDs) whose blood was drawn in Okinawa to test for ehrlichiosis, following transfer from Vietnam between July 14 and September 18, 1969; the fate of the remaining 85 Vietnam service dogs is known.

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**TABLE VI**  
**MEAN AGE AT DEATH BY LAST DUTY STATION FOR THE NECROPSY**  
**POPULATION OF TRAINED U.S. MILITARY WORKING DOGS (MWD) ARCHIVED IN**  
**THE ARMED FORCES INSTITUTE OF PATHOLOGY NECROPSY DATA REGISTRY, 1968-1980**

Duty Station	1968-1973			1974-1980		
	N	Mean age	Std error <sup>a</sup>	N	Mean age	Std error
Republic of Vietnam	1303	5.7	(0.06)			
Vietnam veteran MWDs that died elsewhere	172	6.5	(0.18)	168	9.4	(0.11)
Continental U. S.	844	7.1	(0.09)	1020	9.1	(0.07)
Okinawa	384	7.1	(0.14)	181	8.9	(0.15)
South Korea	269	7.8	(0.12)	316	9.2	(0.11)
West Germany	172	7.6	(0.15)	192	8.6	(0.16)
Thailand	117	6.9	(0.17)	163	8.5	(0.11)
Japan	86	8.4	(0.21)	55	9.6	(0.29)
Philippines	82	7.0	(0.21)	189	8.7	(0.13)
All others combined	123	7.7	(0.16)	128	8.0	(0.20)

<sup>a</sup>Standard error of the mean.

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**TABLE VII**  
**DISTRIBUTION OF KNOWN VIETNAM VETERAN U.S. MILITARY**  
**WORKING DOGS BY LAST DUTY STATION ARCHIVED IN THE ARMED**  
**FORCES INSTITUTE OF PATHOLOGY NECROPSY DATA REGISTRY, 1968-1980**

Duty station	1968-1973		1974-1980	
	N <sup>a</sup>	%	N	%
Okinawa	115/499	23.0	14/195	7.2
South Korea	37/306	12.1	27/343	7.9
Philippines	2/84	2.3	14/203	6.9
Continental U.S.	15/859	1.7	97/1117	8.7
West Germany	2/174	1.1	6/198	3.0
Thailand	1/118	0.8	5/168	3.0
Japan	0/86	0	0/55	0
All others combined	0/123	0	5/133	3.8

<sup>a</sup>Denominator is number of AFIP necropsy submissions from duty station; numerator is the number of these submissions from MWDs who served in Vietnam.

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**TABLE VIII**  
**PRIOR SERVICE HISTORY OF U.S. MILITARY WORKING DOGS (MWD)**  
**THAT DIED IN OKINAWA, 1968-1973, AND WHOSE NECROPSY FINDINGS ARE**  
**ARCHIVED IN THE ARMED FORCES INSTITUTE OF PATHOLOGY NECROPSY DATA REGISTRY**

Year	Records indicate no Vietnam service			Vietnam veteran MWDs			Unknown service history prior to death in Okinawa		
	N	Mean	Std	N	Mean	Std	N	Mean	Std
		age	error <sup>a</sup>		age	error		age	error
1968	56	7.8	(0.28)	21	4.5	(0.55)	25	6.0	(0.53)
1969	63	6.6	(0.32)	52	5.8	(0.31)	2	8.0	(1.00)
1970	70	6.1	(0.41)	14	7.1	(0.77)	7	9.0	(0.31)
1971	74	7.2	(0.34)	8	8.4	(0.82)	2	11.0	( 0 )
1972	45	7.5	(0.36)	17	8.1	(0.37)	0		
1973	38	7.8	(0.28)	3	6.3	(0.67)	2	9.0	( 0 )
Total	346	7.1	(0.15)	115	6.2	(0.24)	38	7.1	(0.43)

<sup>a</sup>Standard error of the mean.

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