



******* MARINE VIETNAM CASUALTIES *******
FROM THE "CACF" LIST

14836 Casualties From Oct-06-1962 to Feb_06_1989
AVERAGE AGE: 21 years - 6 months
AVERAGE Tour: 6 months - 6 days

CASUALTIES BY RANK AND YEAR

<u>RANK</u> <u>GRADE</u>	<u>1962-</u> <u>1964</u>	<u>1965</u>	<u>1966</u>	<u>1967</u>	<u>1968</u>	<u>1969</u>	<u>1970</u>	<u>1971</u>	<u>1972</u>	<u>1973-</u> <u>1989</u>	<u>TOTAL</u> <u>/RANK</u>
PVT. E1:	0	14	51	84	146	63	18	2	0	1	379
PFC. E2:	0	144	750	1169	2077	1308	157	15	1	13	5634
LCPL. E3:	4	158	512	1284	1385	741	260	25	0	9	4378
CPL. E4:	4	92	281	735	789	278	122	11	5	4	2321
SGT. E5:	3	32	116	193	218	82	58	11	0	11	724
SSGT. E6:	0	14	55	67	91	38	15	1	2	16	299
GSGT. E7:	0	5	19	23	40	15	3	2	0	7	114
FSGT. E8:	0	2	3	7	5	8	3	1	0	3	32
SMAJ. E9:	0	0	0	4	10	3	0	0	0	1	18
1-LT. O1:	0	7	26	99	97	51	4	0	0	0	284
2dLT. O2:	3	25	26	42	90	69	39	7	4	3	308
CAPT. O3:	3	10	13	54	75	22	6	2	1	25	211
MAJ. O4:	1	2	6	18	14	9	3	2	2	22	79
LCOL. O5:	1	1	3	1	4	5	2	1	1	11	30
COL. O6:	0	0	1	1	1	1	0	0	0	3	7
MGEN. O8:	0	0	0	1	0	0	0	0	0	0	1
WO. W1:	1	0	0	3	2	0	0	0	0	0	6
CWO2. W2:	0	2	0	1	1	1	0	1	1	0	7
CWO3. W3:	0	0	0	0	2	0	0	0	0	0	2
CWO4..W4:	0	0	0	0	0	0	1	0	1	0	2
TOTAL/YR:	20	508	1862	3786	5047	2694	691	81	18	129	14836

<u>RATE</u>	<u>1964</u>	<u>1965</u>	<u>1966</u>	<u>1967</u>	<u>1968</u>	<u>1969</u>	<u>1970</u>	<u>1971</u>	<u>1972</u>	<u>1989</u>	<u>TOTAL</u>
ENLISTED:	11	461	1787	3566	4761	2536	636	68	8	65	13899
OFFICERS:	8	45	75	216	281	157	54	12	8	64	920
WARRNT-O:	1	2	0	4	5	1	1	1	2	0	17
% ENLIST:	55%	91%	96%	94%	94%	94%	92%	84%	44%	50%	94%

CASUALTIES BY RACE

<u>CODE</u>	<u>DESCRIPTION</u>	<u>ENL</u>	<u>OFF</u>	<u>ALL</u>	<u>%</u>
"C"	CAUCASIAN	11889	928	12817	86.39%
"N"	NEGRO	1860	6	1866	12.58%
"L"	MALAYAN	65	0	65	0.44%
"I"	AM INDIAN	73	1	74	0.50%
"M"	MONGOLIAN	11	2	13	0.09%
"Z"	UNREPORTD	1	0	1	0.01%
TOTALS:		13899	937	14836	

CASUALTIES BY RELIGION

<u>CODE</u>	<u>DESCRIPTION</u>	<u>ENL</u>	<u>OFF</u>	<u>ALL</u>	<u>%</u>
"PN"	PROTESTANT, NO PREF	8423	592	9015	60.76%
"RC"	ROMAN CATHOLIC	4622	300	4922	33.18%
"00"	NO PREFERENCE	731	21	752	5.07%
"HB"	JEWISH	44	3	47	0.32%
"99"	OTHER, NOT REPORTED	29	0	29	0.20%
"LD"	LATTR DAY SNTS, MORM	10	3	13	0.09%
"PB"	PRESBYTERIAN	7	2	9	0.06%
"BO"	BAPTIST ,OTHER CONVE	4	4	8	0.05%
"PO"	PROTESTANT, OTHERS	6	2	8	0.05%
"LU"	LUTHERN & MISSOURI	4	2	6	0.04%
"EP"	EPISCOPAL, ANGLICAN	2	3	5	0.03%
"MT"	METHODIST	3	2	5	0.03%

"GO"	GREEK ORTHODOX	4	0	4	0.03%
"OR"	OTHER RELIGIONS	4	0	4	0.03%
"BU"	BUDDHISM	2	0	2	0.01%
"BS"	SOUTHRN BAPTIST	1	0	1	0.01%
"CC"	CHURCH OF CHRIST	0	1	1	0.01%
"CS"	CHRISTIAN SCIENCE	0	1	1	0.01%
"MS"	MOSLEM, MUSLIM	1	0	1	0.01%
"NZ"	NAZARENE	1	0	1	0.01%
"RO"	RUSSIAN ORTHODOX	1	0	1	0.01%
"UU"	UNITARIAN UNIVERSAL	0	1	1	0.01%
TOTAL:		13899	937	14836	

CASUALTIES BY HOME OF RECORD

CODE	STATE	ENLIST	OFF	ALL
"AK"	ALASKA	8	0	8
"AL"	ALABAMA	264	15	279
"AR"	ARKANSAS	126	7	133
"AZ"	ARIZONA	150	5	155
"CA"	CALIFORNIA	1322	110	1432
"CO"	COLORADO	157	10	167
"CT"	CONNECTICUT	183	17	200
"DC"	WASH D.C.	65	3	68
"DE"	DELAWARE	30	2	32
"FL"	FLORIDA	438	34	472
"GA"	GEORGIA	324	17	341
"HI"	HAWAII	41	3	44
"IA"	IOWA	183	19	202
"ID"	IDAHO	48	6	54
"IL"	ILLINOIS	771	63	834
"IN"	INDIANA	400	20	420
"KS"	KANSAS	134	14	148
"KY"	KENTUCKY	210	6	216
"LA"	LOUISIANA	217	10	227
"MA"	MASSACHUSETTS	433	37	470
"MD"	MARYLAND	279	16	295
"ME"	MAINE	85	3	88
"MI"	MICHIGAN	598	22	620
"MN"	MINNESOTA	225	17	242
"MO"	MISSOURI	302	23	325
"MS"	MISSISSIPPI	103	9	112
"MT"	MONTANA	54	5	59
"NC"	NORTH CAROLINA	293	20	313
"ND"	NORTH DAKOTA	33	4	37
"NE"	NEBRASKA	73	8	81
"NH"	NEW HAMPSHIRE	64	6	70
"NJ"	NEW JERSEY	393	29	422
"NM"	NEW MEXICO	99	7	106
"NV"	NEVADA	43	2	45
"NY"	NEW YORK	1031	91	1122
"OH"	OHIO	870	34	904
"OK"	OKLAHOMA	199	21	220
"OR"	OREGON	187	9	196
"PA"	PENNSYLVANIA	915	57	972
"RI"	RHODE ISLAND	42	7	49
"SC"	SOUTH CAROLINA	180	7	187
"SD"	SOUTH DAKOTA	27	5	32
"TN"	TENNESSEE	292	24	316
"TX"	TEXAS	840	47	887
"UT"	UTAH	79	6	85
"VA"	VIRGINIA	291	23	314
"VT"	VERMONT	22	0	22
"WA"	WASHINGTON	253	15	268
"WV"	WEST VIRGINIA	174	7	181
"WI"	WISCONSIN	273	11	284
"WY"	WYOMING	22	1	23
"PR"	PUERTO RICO	16	1	17
"VQ"	VIRGIN ISLANDS	1	0	1
"GU"	GUAM	11	0	11
"SO"	AMERICAN SAMOA	3	0	3
"XC"	CANADA	20	0	20

"XM"	MEXICO	1	1	2
"XA"	AUSTRALIA	0	1	1
"XF"	FRANCE	1	0	1
"XN"	NEW ZEALAND	1	0	1
TOTAL:		13899	937	14836

CASUALTIES BY M.O.S. (HIGHEST 50)

<u>MOS</u>	<u>#CAS</u>	<u>%CAS</u>	<u>MOS TITLE</u>
1.	0311	7880	53.11 Rifleman
2.	0351	1122	7.56 Assaultman
3.	0331	1086	7.32 Machinegunner
4.	0341	568	3.83 Mortarman
5.	1371	329	2.22 Combat Engineer
6.	0302	277	1.87 Infantry Off
7.	0369	263	1.77 Infantry Unit Leader
8.	2531	257	1.73 Field Radio Oper
9.	3531	230	1.55 Motor Veh Oper
10.	0811	226	1.52 Field Artillery Cannoneer
11.	0301	131	0.88 Basic Infantry Off
12.	1833	128	0.86 Assault Amphib Veh (AAV) Crew
13.	2533	116	0.78 Radio Telegraph Oper
14.	2511	112	0.75 Wireman
15.	1811	107	0.72 M60A1 Tank Crew
16.	7562	78	0.53 Pilot CH-46 Qualified
17.	0141	69	0.47 Admin Man
18.	0353	69	0.47 __MOS DESCRIPTION NOT IN TABLE__
19.	3516	63	0.42 Automotive Mech
20.	3051	53	0.36 Warehouse Clerk
21.	3371	50	0.34 Cook
22.	0000	49	0.33 __NOT SPECIFIED IN CAS LIST__
23.	1345	47	0.32 Engineer Equip Operator
24.	7335	41	0.28 Pilot HMH
25.	6320	36	0.24 __MOS DESCRIPTION NOT IN TABLE__
26.	0802	35	0.24 Field Artillery Off
27.	7563	33	0.22 Pilot UH-1N Qualified
28.	0300	32	0.22 Basic Infantryman
29.	1391	32	0.22 Bulk Fuel Spclst
30.	1381	31	0.21 Shore Party Spclst
31.	2311	31	0.21 Ammunitn Tech
32.	6332	31	0.21 Aircrft Electrnc Syst Tech A-4/TA-4/OA-4
33.	0844	30	0.20 Field Artillery Fire Control Man
34.	6422	28	0.19 Aircrft Cryptographic Syst Tech IMA
35.	9999	28	0.19 First Sergeant
36.	3041	27	0.18 Supply Admin Man - Manual Accntg
37.	0846	26	0.18 Artillery Scout Observer
38.	0801	24	0.16 Basic Field Artillery Off
39.	7501	23	0.16 Pilot VMA A-4 Qualified
40.	1341	22	0.15 Engineer Equip Mech
41.	7582	22	0.15 FRS Basic EA-6A/B Electrnc Warfare Off
42.	2142	19	0.13 Tracked Veh Repairer, Assault Amphib Veh
43.	7521	19	0.13 FRS Basic F/A-18 Pilot
44.	2542	18	0.12 Comm Center Oper
45.	1121	17	0.11 Plumbing and Water Supply Spclst
46.	2111	17	0.11 Small Arms Repairer/Tech
47.	2532	17	0.11 Equip Oper
48.	6242	17	0.11 Aircrft Electrcal Syst Tech, Trnsprt and Helo
49.	7561	17	0.11 FRS Basic CH-46 Pilot
50.	1802	16	0.11 Tank Off

PILOT CASUALTIES BY M.O.S.

(Includes only those found with "PILOT" in the MOS description.)

<u>#CAS</u>	<u>%PCAS</u>	<u>MOS</u>	<u>M.O.S. DESCRIPTION</u>
78	26.0	7562	Pilot CH-46 Qualified
41	13.7	7335	Pilot HMH
33	11.0	7563	Pilot UH-1N Qualified
23	7.7	7501	Pilot VMA A-4 Qualified
19	6.3	7521	FRS Basic F/A-18 Pilot
17	5.7	7561	FRS Basic CH-46 Pilot
16	5.3	7564	Pilot CH-53A/D Qualified
12	4.0	7511	Pilot VMA (AW) FRS Basic A-6E
11	3.7	7333	Pilot VME (Jet)
8	2.7	7565	Pilot AH-1 Qualified

7 2.3 7522 Pilot VMFA F-4S Qualified
6 2.0 7532 Pilot VMF/VMF(AW)F-8D/E
6 2.0 7576 Pilot VMO OV-10
4 1.3 7302 Pilot VMF
4 1.3 7307 Pilot VMR (AW) Multi Place
3 1.0 7305 Pilot VMR (AW) Single Place
3 1.0 7542 Pilot VMAQ/EA-6A Qualified
2 0.7 7308 Pilot VMGR
2 0.7 7331 Pilot VME (Prop)
2 0.7 7557 Pilot KC-130 Aircraft Commander
2 0.7 7597 Basic Rotary Wing Pilot
1 0.3 7545 Pilot VMAQ/RF-4B Qualified
300 PILOT CASUALTIES (2.0% OF ALL CASUALTIES)

CASUALTIES BY REPORTED COUNTRY OF CASUALTY:

<u>CODE</u>	<u>COUNTRY</u>	<u>ENL</u>	<u>OFF</u>	<u>TOTAL</u>
"VS"	S. VIETNAM	13865	879	14744
"VN"	N. VIETNAM	13	38	51
"LA"	LAOS	5	20	25
"CB"	CAMBODIA	16	0	16
TOTALS:		13899	937	14836

CASUALTIES BY REPORTED PROVINCE OF CASUALTY

<u>CODE</u>	<u>PROVINCE</u>	<u>ENL</u>	<u>OFF</u>	<u>TOTAL</u>
"03"	QUANG NAM	6140	340	6480
"01"	QUANG TRI	5072	327	5399
"02"	THUA THIEN	1164	78	1242
"04"	QUANG TIN	773	56	829
"05"	QUANG NGAI	516	33	549
"07"	BINH DINH	13	5	18
"24"	GIA DINH	11	1	12
"11"	KHANH HOA	10	1	11
"26"	PHUOC TUY	5	3	8
"09"	PHU YEN	6	1	7
"25"	BIEN HOA	6	1	7
"33"	KIEN HOA	6	0	6
"08"	PLEIKU	3	1	4
"06"	KONTUM	1	0	1
"10"	DARLAC	0	1	1
"13"	QUANG DUC	0	1	1
"16"	NINH THUAN	1	0	1
"17"	BINH THUAN	0	1	1
"18"	BINH THUY	0	1	1
"30"	DINH TUONG	0	1	1
"32"	VINH LONG	1	0	1
"35"	PHONG DINH	1	0	1
"41"	PHU BON	2	0	2
"NY"	NORTH VN "Y"	7	5	12
"NZ"	NORTH VN "Z"	0	28	28
"NU"	NORTH VN "?"	6	2	8
"LZ"	LAOS "Z"	4	17	21
"CB"	CAMBODIA	16	0	16
"81"	OFFSHORE, MR 1	27	21	48
"83"	OFFSHORE, MR 3	1	0	1
"89"	OFFSHORE, MR ?	26	2	28
"99"	PROV UNK, MR ?	10	6	16
"--"	UNKNOWN	71	4	75
TOTALS:		13899	937	14836

CASUALTIES BY YEAR/MONTHS :

<u>YEAR</u>	<u>Jan</u>	<u>Feb</u>	<u>Mar</u>	<u>Apr</u>	<u>May</u>	<u>Jun</u>	<u>Jul</u>	<u>Aug</u>	<u>Sep</u>	<u>Oct</u>	<u>Nov</u>	<u>Dec</u>	<u>YEAR</u>
1962	0	0	0	0	0	0	0	0	0	5	0	0	5
1963	0	0	1	0	0	0	0	0	0	9	0	0	10
1964	0	1	0	0	1	0	0	0	0	0	3	0	5
1965	1	3	9	4	13	43	37	133	51	64	50	100	508
1966	65	104	261	105	151	138	228	150	241	142	116	161	1862

1967	162	175	350	341	622	321	377	240	482	232	213	271	3786
1968	432	688	502	449	806	444	355	389	348	181	229	224	5047
1969	207	474	361	248	312	276	169	233	136	96	93	89	2694
1970	76	104	85	69	54	70	45	61	49	26	37	15	691
1971	27	23	14	8	3	1	0	0	1	0	0	4	81
1972	1	0	0	3	1	4	5	2	0	1	0	1	18
1973	1	1	0	0	0	0	1	1	1	2	0	0	7
1974	3	1	0	1	0	4	5	3	3	3	1	2	26
1975	3	0	1	6	12	2	1	1	2	0	3	1	32
1976	0	2	1	1	1	1	5	0	1	1	0	0	13
1977	1	0	0	0	0	0	0	1	0	0	0	2	4
1978	2	3	4	2	0	4	0	2	2	1	5	3	28
1979	2	0	3	0	0	0	0	0	0	0	0	0	5
1980	0	6	0	0	0	0	0	2	0	0	0	0	8
1983	0	0	0	0	0	0	0	0	1	0	0	0	1
1985	0	0	1	0	0	0	0	1	0	0	0	0	2
1986	0	0	0	0	0	0	0	1	0	1	0	0	2
1989	0	1	0	0	0	0	0	0	0	0	0	0	1
													TOTAL: 14836

WORST 7 MARINE CASUALTY YEARS:

1. 1968 - 5047 CASUALTIES.
2. 1967 - 3786 CASUALTIES.
3. 1969 - 2694 CASUALTIES.
4. 1966 - 1862 CASUALTIES.
5. 1970 - 691 CASUALTIES.
6. 1965 - 508 CASUALTIES.
7. 1971 - 81 CASUALTIES.

WORST 10 MARINE CASUALTY MONTHS:

1. May 1968 - 806 CASUALTIES.
2. Feb 1968 - 688 CASUALTIES.
3. May 1967 - 622 CASUALTIES.
4. Mar 1968 - 502 CASUALTIES.
5. Sep 1967 - 482 CASUALTIES.
6. Feb 1969 - 474 CASUALTIES.
7. Apr 1968 - 449 CASUALTIES.
8. Jun 1968 - 444 CASUALTIES.
9. Jan 1968 - 432 CASUALTIES.
10. Aug 1968 - 389 CASUALTIES.

WORST 20 MARINE CASUALTY DAYS:

1. Jul 2 1967 - 88 CASUALTIES.
2. Feb 23 1969 - 83 CASUALTIES.
3. Mar 6 1968 - 73 CASUALTIES.
4. Feb 25 1969 - 70 CASUALTIES.
5. Feb 7 1968 - 65 CASUALTIES.
6. May 2 1968 - 64 CASUALTIES.
7. Sep 6 1967 - 63 CASUALTIES.
8. Sep 4 1967 - 62 CASUALTIES.
9. Feb 6 1968 - 59 CASUALTIES.
10. Apr 30 1967 - 57 CASUALTIES.
11. May 8 1967 - 57 CASUALTIES.
12. Jan 31 1968 - 57 CASUALTIES.
13. Aug 24 1965 - 55 CASUALTIES.
14. May 31 1968 - 55 CASUALTIES.
15. Sep 10 1967 - 54 CASUALTIES.
16. Mar 5 1966 - 52 CASUALTIES.
17. Dec 27 1967 - 50 CASUALTIES.
18. Apr 21 1967 - 49 CASUALTIES.
19. Feb 8 1968 - 48 CASUALTIES.
20. Sep 7 1967 - 46 CASUALTIES.

CASUALTIES BY CASUALTY CLASSIFICATION - "CASTYPE"

<u>CODE</u>	<u>DESCRIPTION</u>	<u>ENLIST</u>	<u>OFF</u>	<u>ALL</u>	<u>%</u>
"A1"	HOSTILE, DIED	10831	662	11493	77.5
"A2"	HOSTILE, DIED WOUNDS	1414	58	1472	9.9
"A3"	HOSTILE, DIED MISSING	43	65	108	0.7

"A4"	HOSTILE, DIED CAPTURED	5	4	9	0.1
"C1"	NON-HOSTILE, DIED OTHER	1298	138	1436	9.7
"C2"	NON-HOSTILE, DIED ILLNESS/INJURY	305	10	315	2.1
"C3"	NON-HOSTILE, DIED MISSING	3	0	3	0.0
TOTAL CASUALTIES.....:		13899	937	14836	
ALL HOSTILE CASUALTIES.....:		12293	789	13082	88.2%
ALL NON-HOSTILE CASUALTIES....:		1606	148	1754	11.8%
TOTAL CASUALTIES.....:		13899	937	14836	

CASUALTIES BY CASUALTY CLASSIFICATION - "REASON"

<u>CODE</u>	<u>DESCRIPTION</u>	<u>ENLIST</u>	<u>OFF</u>	<u>ALL</u>	<u>%</u>
"D"	GUN, SMALL ARMS FIRE	5425	227	5652	38.1
"G"	OTHER EXPLOSIVE DEVICE	2935	122	3057	20.6
"E"	ARTILLERY, ROCKET, MORTAR	2026	93	2119	14.3
"H"	MULTIPLE FRAGMENTATION WOUNDS	977	30	1007	6.8
"B"	AIR LOSS, CRASH - LAND	498	365	863	5.8
"I"	MISADVENTURE	400	13	413	2.8
"U"	OTHER ACCIDENT	372	10	382	2.6
"T"	ACCIDENTAL HOMICIDE	307	5	312	2.1
"J"	DROWNED, SUFFOCATED	188	7	195	1.3
"C"	VEHICLE LOSS, CRASH	182	4	186	1.3
"A"	AIR LOSS, CRASH - SEA	116	38	154	1.0
"R"	ACCIDENTAL SELF-DESTRUCTION	129	3	132	0.9
"Z"	UNKNOWN, NOT REPORTED	57	5	62	0.4
"V"	OTHER CAUSES	57	4	61	0.4
"L"	ILLNESS, DISEASE	55	2	57	0.4
"K"	BURNS	53	1	54	0.4
"M"	MALARIA	40	0	40	0.3
"O"	HEART ATTACK	20	5	25	0.2
"Q"	SUICIDE	21	2	23	0.2
"S"	INTENTIONAL HOMICIDE	21	1	22	0.1
"F"	BOMB EXPLOSION	11	0	11	0.1
"P"	STROKE	5	0	5	0.0
"N"	HEPATITIS	4	0	4	0.0
TOTAL CASUALTIES.....:		13899	937	14836	

CASUALTIES BY CASUALTY CLASSIFICATION - "AIRNOAIR"

<u>CODE</u>	<u>DESCRIPTION</u>	<u>ENLIST</u>	<u>OFF</u>	<u>ALL</u>	<u>%</u>
"01"	FIXED WING - PILOT	0	100	100	0.7
"02"	FIXED WING - CREW	17	50	67	0.5
"03"	FIXED WING - NONCREW	125	21	146	1.0
"04"	HELICOPTER - PILOT	0	104	104	0.7
"05"	HELICOPTER - CREW	241	94	335	2.3
"06"	HELICOPTER - NONCREW	228	33	261	1.8
"07"	GROUND CASUALTY	13277	534	13811	93.1
"08"	SEA CASUALTY	10	1	11	0.1
TOTAL CASUALTIES.....:		13898	937	14835	
ALL GROUND CASUALTIES		13277	534	13811	93.09
ALL HELO CASUALTIES		469	231	700	4.72
ALL FIXED WING CASUALTIES .:		142	171	313	2.11
ALL SEA CASUALTIES		10	1	11	0.07
TOTAL CASUALTIES.....:		13898	937	14835	

NUMBER OF MARRIED MARINE CASUALTIES: 2675 (18.0%)
NUMBER OF SINGLE MARINE CASUALTIES: 12161 (81.8%)

MARINES LISTED AS "BODY NOT RECOVERED"

ENLISTED: 155 OFFICERS: 123 TOTAL: 278

EARLIEST MARINE CASUALTIES: Oct-06-1962

CPL. THOMAS E. ANDERSON ID:1660558 MOS:6481, CAS:621006, AGE:23
SGT. RICHARD E. HAMILTON ID:1410541 MOS:6442, CAS:621006, AGE:27
SGT. JERALD W. PENDELL ID:1526810 MOS:1319, CAS:621006, AGE:29
2dLT. MICHAEL J. TUNNEY ID:081580 MOS:7331, CAS:621006, AGE:26
LCPL. MIGUEL A. VALENTIN ID:1924035 MOS:6611, CAS:621006, AGE:19

YOUNGEST MARINE CASUALTY: 17 yrs - 9 months

LCPL. PATRICK E. SINCLAIR ID:2384919 MOS:0311, CAS:680906, AGE:17

OLDEST (by CAS date) MARINE CASUALTY: 57 yrs - 7 months

SMAJ. JOHN F. DINGWALL ID:097168281 MOS:6691, CAS:780919, AGE:57

OLDEST (by CAS date before 1974) MARINE CASUALTY: 56 yrs - 8 months

FSGT. SALVATORE A. GELUSO ID:060011328 MOS:3381, CAS:690708, AGE:56

Statistics compiled by Marvin Clement 27 November 2000