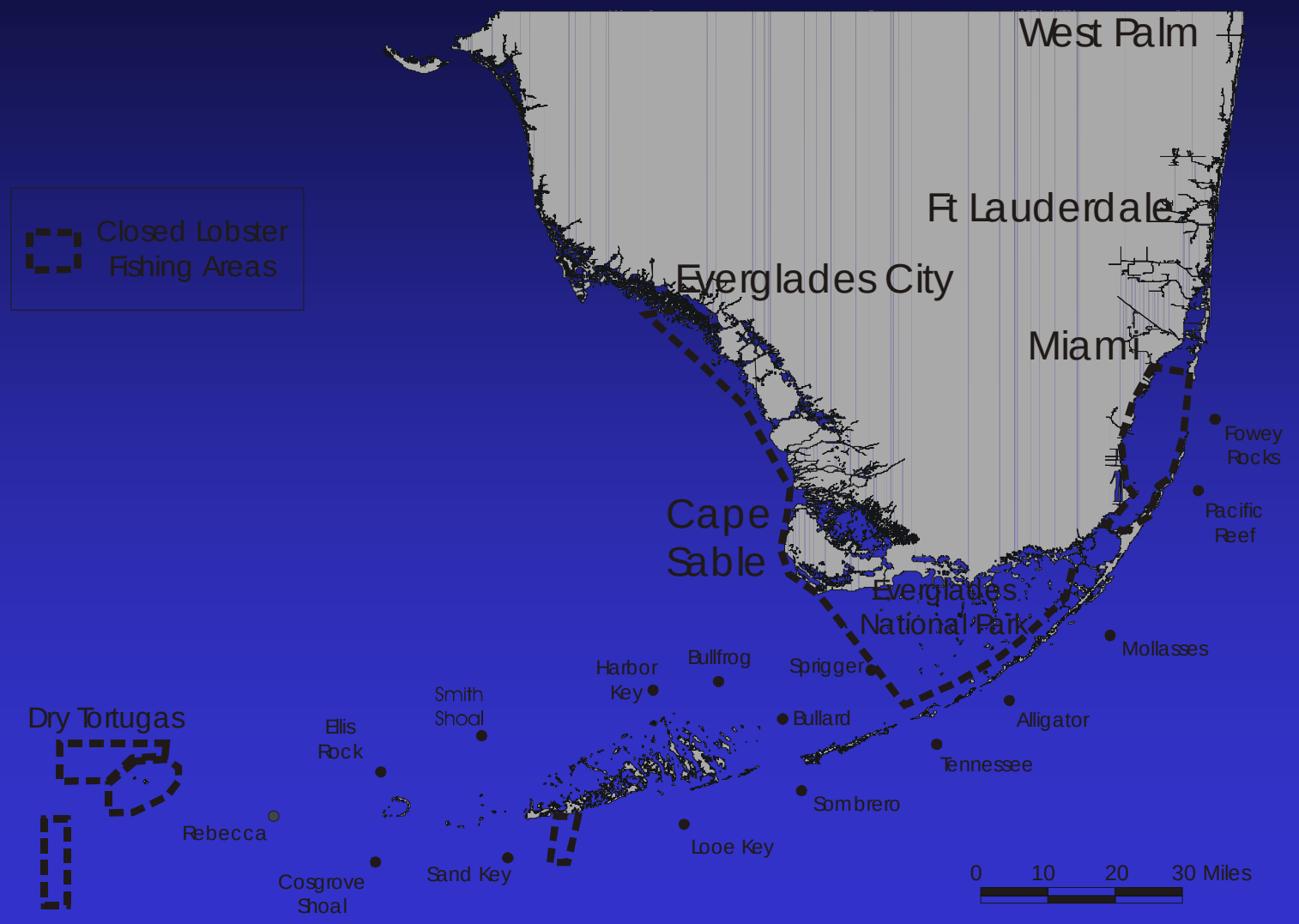
FWC Fishery Observer Program: Caribbean Spiny Lobster, *Panulirus argus*

Observer Data Format

Field	Format	Variables
TNM	num	sequential numbers identifying specific traps associated with one trip
SP	char	Marine life species codes, several additions have been made for species not on the list
SX	num	if SP=317 then 1=male, 2=female If SP not= 317 then the number is a frequency
ST	num	1= fresh spermatophore, 2=eroded, 3=egg bearing 4=dead
SIZE	num	carapace length (mm), 76mm lobster measure to 0.1mm Fish length (inch), total lengths except when fishery management plans specify otherwise
GRID	num	1-minute square regions with unique 4 or 5 digit identifiers
TSAT	char	w=wood, y=wire, b=broken, m=missing, r=robbed, and combinations of each
SOAK	num	days trap deployed
BAIT	char	c=cow hide, f=fish, p=pig's feet, z=cheese, g=cat food, k= canned sardines, s followed by a # is the number of sublegal lobster, l followed by a # is the number of legal lobster reportedly left in the trap from the previous trip.
TRIP	char	initial of observer and the date i.e. t080693 (Aug 6, 1993)
MONTH	num	month
AREA	num	fishing area (see appropriate charts)

Stratified Sampling Areas



Sample Size

Table 1. Number of traps sampled each month.

Fishing Season	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar
1993-94	2210	3211	3257	2514	2904	2479	2717	2991
1994-95	1834	1501	1677	1349	1570	1508	1086	974
1995-96	2304	2808	2344	2209	2107	1942	1618	1538
1996-97	1996	1647	1746	1424	1482	1460	1124	1467
1997-98	1727	1678	1601	1315	1526	1107	1475	1070
1998-99	1861	803	1038	1609	1512	962	875	967
1999-2000	862	701	131	351	706	697	924	354
2000-01	1224	1601	1119	901	840	956	705	911

Table 2. Number of traps sampled in each fishing area.

Fishing Season	Florida Bay	Upper Keys Ocean	Middle Keys Gulf	Middle Keys Ocean	Lower Keys Gulf	Lower Keys Ocean	Marquesas Gulf	Marquesas Ocean	Tortugas
1993-94	2625	3455	4104	3141	3133	3127	2698	*a	
1994-95	1686	2083	2385	2241	*b	*c	1403	1701	
1995-96	1565	4604	2702	1777	*b	*c	1451	1812	2959
1996-97	1624	2209	2097	2159	*b	*c	2138	1583	536
1997-98	1573	1930	2212	2722	*b	*c	1883	1179	
1998-99	1405	2075	1507	1652	*b	*c	1618	1370	
1999-2000	805	634	1009	1156	*b	*c	735	200	145
2000-01	1051	1829	1641	1510	*b	*c	1054	1118	54

*a Included in Marquesas Gulf

*b Included in Middle Keys Gulf

*c Included in Middle Keys Ocean

Catch Statistics

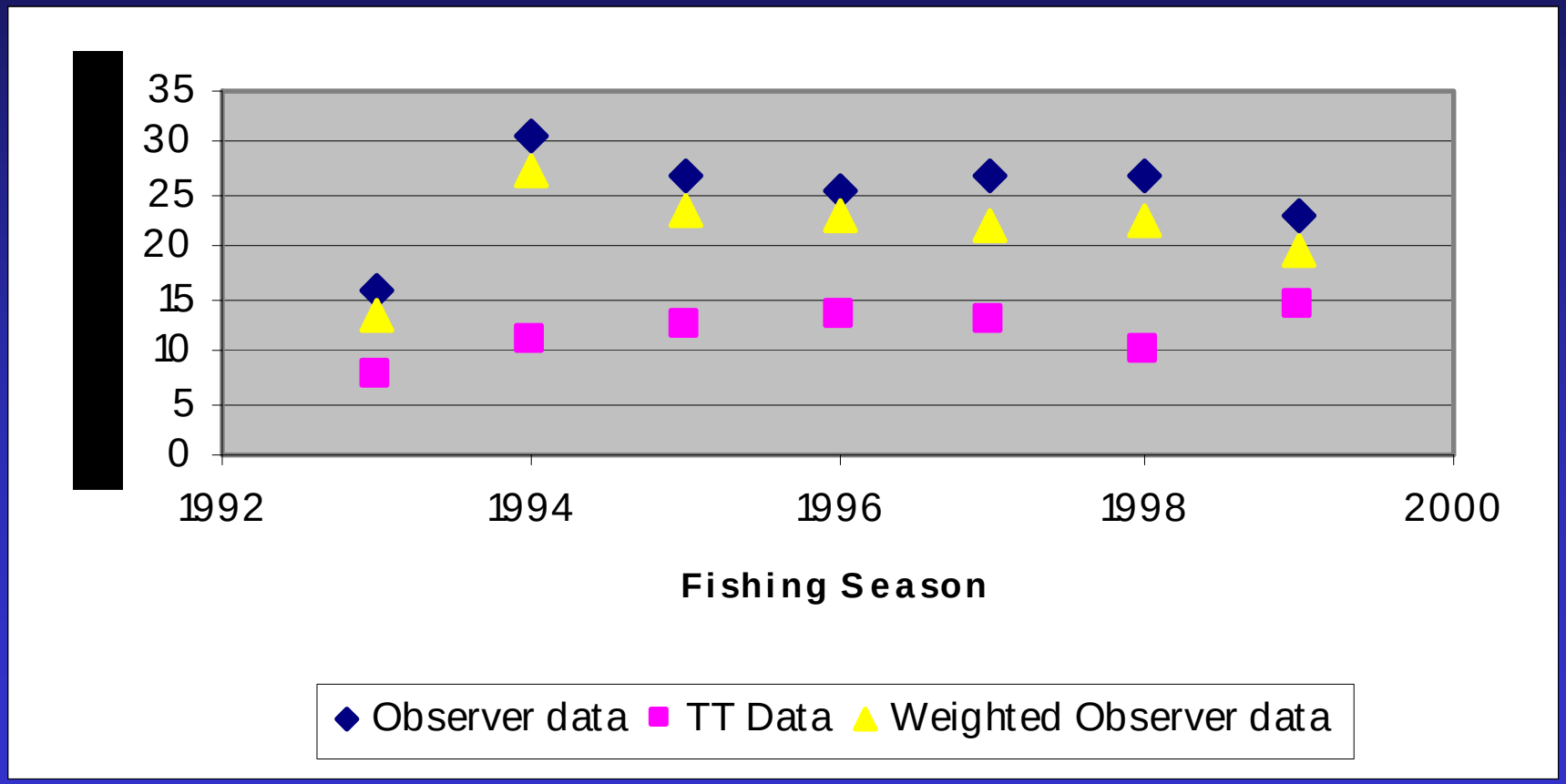
Table 4. Mean lobster catch (grams) per trap observed in each month of each fishing season.

Fishing Season	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar
1993-94	415	434	425	321	318	308	235	372
1994-95	1058	753	816	783	424	417	581	297
1995-96	800	699	944	631	431	505	381	478
1996-97	861	613	798	988	596	357	304	269
1997-98	731	688	726	765	739	770	565	515
1998-99	750	778	1187	676	478	337	275	443
1999-2000	1335	1463	2260	962	931	481	345	1031
2000-01	535	599	644	378	307	506	227	507

Table 5. Mean lobster catch (grams) per trap observed in each area for each fishing season.

Fishing Season	Florida Bay	Upper Keys Ocean	Middle Keys Gulf	Middle Keys Ocean	Lower Keys Gulf	Lower Keys Ocean	Marquesas Gulf	Marquesas Ocean	Tortugas
1993-94	316	520	287	277	312	321	475	.	.
1994-95	381	923	586	471	.	.	807	916	.
1995-96	438	862	491	507	.	.	859	799	676
1996-97	300	1001	573	469	.	.	807	528	363
1997-98	427	789	583	637	.	.	843	989	.
1998-99	331	756	575	528	.	.	777	749	.
1999-2000	800	645	880	809	.	.	1325	1479	2189
2000-01	339	534	295	369	351	806	643	626	192

Data Comparison to Trip Tickets



Sublegal Lobster Abundance
Use as an Index

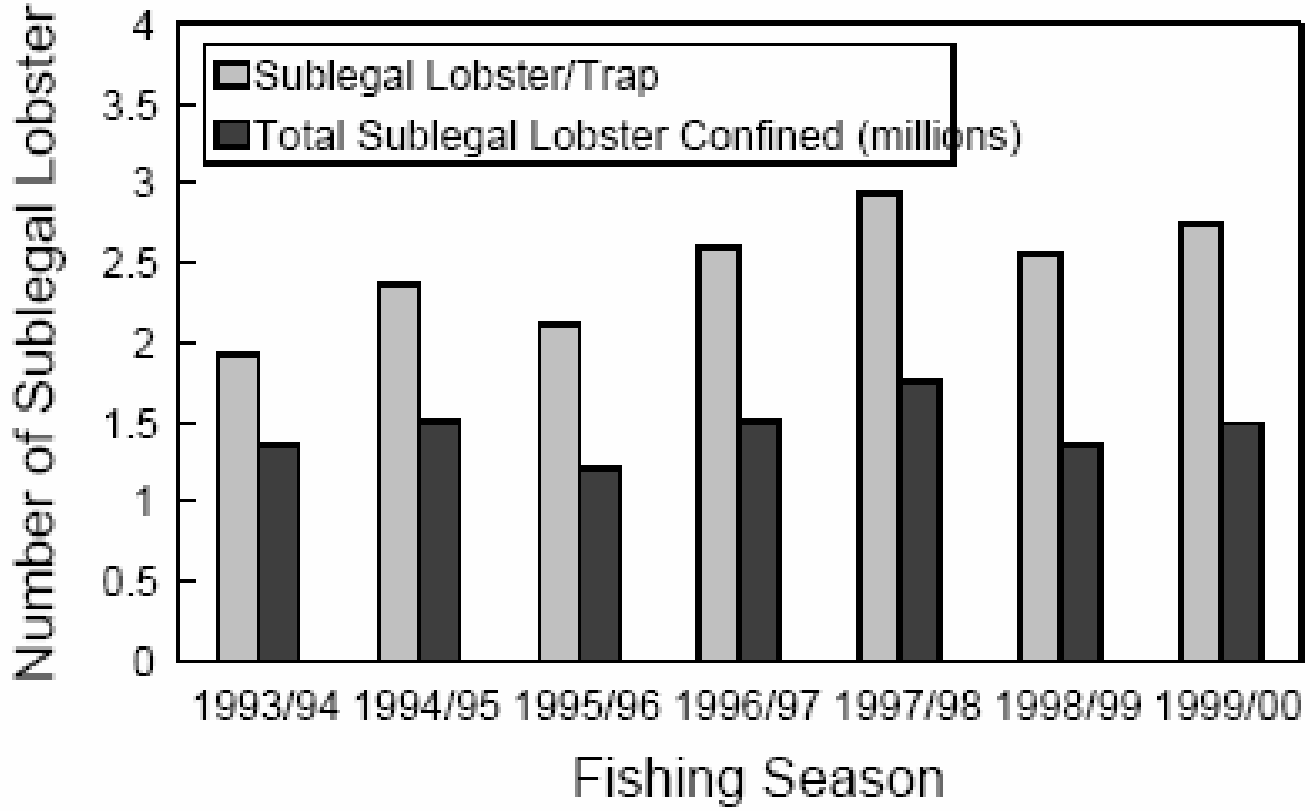


Figure 1. The average number of sublegal-sized lobsters (60 to 76.1 mm carapace length lobsters) per trap and the total number of sublegal-sized lobster confined when all allowable traps are in use. A total of 191,377 lobsters were observed

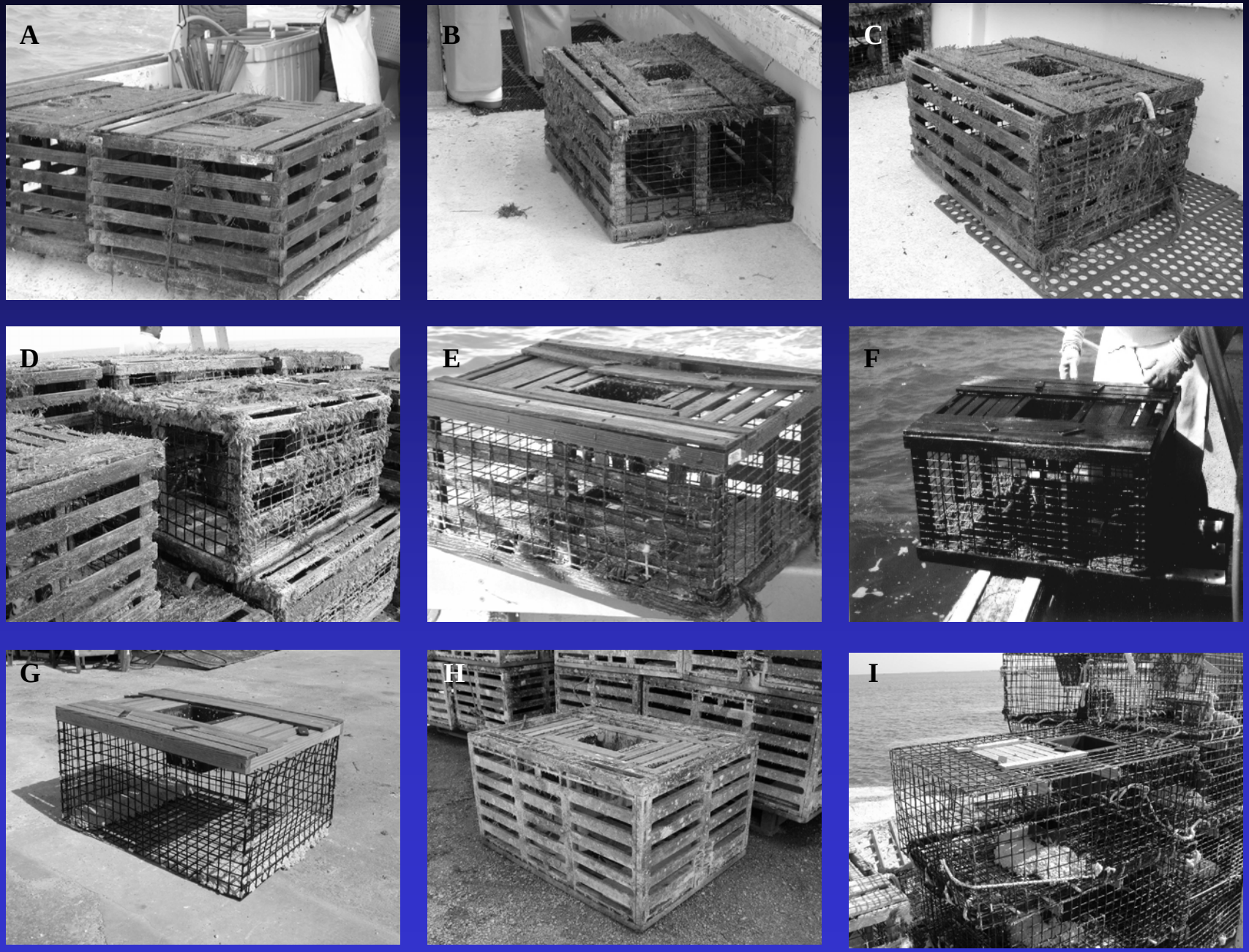



Figure 1. Examples of lobster traps in south Florida. A) wood trap, B) hybrid wood-wire trap with two wood and two wire sides, C) wire reinforced trap with four wood sides, two of which are reinforced with wire, D) hybrid wood-wire trap with four wire sides, two of which also have 4-wooden slats, E) hybrid wood-wire trap with four wire sides, two of which also have 5-wooden slats, F) hybrid wood-wire trap with four wire sides, G) wire trap with a biodegradable top, H) plastic trap, I) wire trap with a biodegradable panel.