

**Reducing unwanted catches of trammel nets:
experimental results of the “guarding net” in the
caramote prawn, *Penaeus kerathurus*, small-scale
fishery of the Ligurian Sea (western Mediterranean)**

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Supplementary material

Table S1. – Taxonomic list of the species caught, with density and biomass indices according to the three types of net. STN, standard trammel net; TGN20, standard trammel net with guarding net of 19 cm; TGN25, standard trammel net with guarding net of 24 cm. Cat, commercial category (C, commercial; NC, non commercial; H, habitat; B, benthic; D, demersal or nektobenthic; P, pelagic).

Taxa	Cat	H	STN				TGN20				TGN25			
			n/1000 m	kg/1000 m	mean	SD	n/1000 m	kg/1000 m	mean	SD	n/1000 m	kg/1000 m	mean	SD
CRUSTACEA			459.5	247.092	7.475	3.006	212.333	174.692	4.260	1.898	168.667	110.691	3.732	1.930
<i>Inachus</i> sp.	NC	B									0.167	0.645	<0.001	0.001
<i>Inachus thoracicus</i>	NC	B	0.167	0.645	0.001	0.002	0.167	0.645	0.001	0.002				
<i>Liocarcinus vernalis</i>	NC	B	258.333	249.304	1.751	1.583	83.167	172.255	0.502	0.978	50.500	96.266	0.333	0.621
<i>Macropipus tuberculatus</i>	NC	B	0.167	0.645	0.002	0.006								
<i>Macropodia longipes</i>	NC	B									0.333	1.291	0.001	0.003
<i>Macropodia longirostris</i>	NC	B	0.167	0.645	0.001	0.003								
<i>Macropodia</i> sp.	NC	B	0.167	0.645										
<i>Penaeus kerathurus</i>	C	D	117.667	85.322	3.326	2.406	77.167	64.065	2.159	1.834	80.500	75.055	2.267	2.034
<i>Medorippe lanata</i>	NC	B	0.333	0.880	0.004	0.010	0.167	0.645	0.002	0.006	0.333	1.291	0.002	0.009
<i>Squilla mantis</i>	C	B	82.333	60.433	2.392	1.836	51.667	43.902	1.597	1.323	36.833	39.905	1.130	1.113
<i>Upogebia</i> sp.	NC	B	0.167	0.645	0.001	0.003								
ECHINODERMATA			0.500	1.402	0.002	0.006	0.167	0.645	<0.001	0.001	0.167	0.645	<0.001	0.001
<i>Astropecten irregularis</i>	NC	B	0.500	1.402	0.002	0.006								
<i>Oestergerenia digitata</i>	NC	B					0.167	0.645	<0.001	0.001				
Ophiuroidea indet.	NC	B									0.167	0.645	<0.001	0.001
BIVALVIA			0.167	0.645	0.001	0.004								
<i>Anadara demiri</i>	NC	B	0.167	0.645	0.001	0.004								
GASTROPODA			29.0	37.2	0.166	0.213	8500	12.291	0.047	0.106	3.833	10.643	0.033	0.091
<i>Aporrhais pespelecani</i>	NC	B	25.500	36.818	0.118	0.181	7.500	18.540	0.037	0.090	3.000	8.139	0.015	0.039
<i>Bolinus brandaris</i>	NC	B	1.500	1.842	0.045	0.059	0.500	1.035	0.009	0.019	0.833	2.616	0.019	0.052
<i>Nassarius mutabilis</i>	NC	B	2.000	3.919	0.004	0.007	0.500	1.035	0.001	0.002				
CEPHALOPODA			2.000	2.155	0.374	0.440	0.667	1.484	0.123	0.293	1.333	2.289	0.317	0.495
<i>Sepia officinalis</i>	C	B	2.000	2.155	0.374	0.440	0.667	1.484	0.123	0.293	1.333	2.289	0.317	0.495
CONDRICTHYES			3.167	5.936	0.516	1.469	0.333	0.880	0.120	0.438	0.167	0.645	0.008	0.030
<i>Raja asterias</i>	C	B	1.500	3.873	0.516	1.469	0.333	0.880	0.120	0.438				
<i>Raja clavata</i>	C	B	0.500	1.936	0.467	1.809								
<i>Raja polystigma</i>	C	B	0.333	1.291	0.028	0.107					0.167	0.645	0.008	0.030
<i>Torpedo torpedo</i>	C	B	0.833	2.041	0.120	0.330								
OSTEICHTHYES			150.5	219.2	6.786	12.977	140.2	251.2	6.351	14.777	140.3	241.4	4.509	10.576
<i>Alosa fallax nilotica</i>	C	P	0.167	0.645	0.012	0.046	0.167	0.645	0.028	0.108	0.167	0.645	0.017	0.066
<i>Arnoglossus laterna</i>	NC	B	3.333	4.970	0.100	0.282	0.667	1.759	0.008	0.022	0.833	2.616	0.011	0.036
<i>Boops boops</i>	C	P							0.167	0.645	0.022	0.083	0.000	0.000
<i>Buglossidium luteum</i>	NC	B	0.022	0.084	<0.001	<0.001					0.022	0.084	<0.001	<0.001
<i>Chelidonichthys obscurus</i>	C	B	0.167	0.645	0.001	0.003								
<i>Chelydonichthys lucerna</i>	C	B	11.667	26.854	0.207	0.306	7.667	18.909	0.125	0.212	8.167	20.734	0.124	0.237
<i>Conger conger</i>	C	B	0.167	0.645	0.011	0.041								
<i>Deltenosteus quadrimaculatus</i>	NC	B	0.167	0.154	0.001	0.005								
<i>Diplodus annularis</i>	C	D	5.833	9.386	0.206	0.326	3.167	6.779	0.103	0.238	3.833	6.041	0.128	0.193
<i>Engraulis encrasicolus</i>	C	P	86.500	141.219	0.578	0.960	101.833	184.610	0.697	1.279	104.167	178.362	0.679	1.157
<i>Gobius geniporus</i>	NC	B					0.167	0.645	0.001	0.005				
<i>Gobius niger</i>	C	B	0.833	1.543	0.013	0.023								
<i>Hippocampus hippocampus</i>	NC	B	0.167	0.645	0.001	0.003								
<i>Liza aurata</i>	C	P					0.167	0.645	0.054	0.210				
<i>Liza ramada</i>	C	P	9.500	26.863	3.807	10.330	10.167	31.530	4.154	12.387	6.500	22.456	2.450	8.243
<i>Merluccius merluccius</i>	C	D					0.500	1.402	0.005	0.014	0.167	0.645	0.003	0.010
<i>Mullus barbatus</i>	C	D	0.333	0.880	0.015	0.040					0.167	0.645	0.003	0.012
<i>Oblada melanura</i>	C	P					0.167	0.645	0.009	0.035				
<i>Pagellus acarne</i>	C	D	0.167	0.645	0.001	0.003					0.333	0.880	0.009	0.033
<i>Pagellus erythrinus</i>	C	D	1.167	2.814	0.087	0.209	0.333	1.291	0.029	0.114	0.500	1.035	0.033	0.070
<i>Pomatomus saltatrix</i>	C	P									0.333	0.880	0.045	0.134
<i>Sardina pilchardus</i>	C	P	2.000	3.684	0.018	0.028	1.500	3.987	0.014	0.044	2.667	4.674	0.030	0.053
<i>Sardinella aurita</i>	C	P	3.833	8.705	0.150	0.355	3.000	8.409	0.110	0.333	2.333	6.578	0.081	0.242
<i>Sciaena umbra</i>	C	D	0.167	0.645	0.012	0.046					0.167	0.645	0.034	0.133
<i>Scomber scombrus</i>	C	P	0.167	0.645	0.013	0.050	0.333	0.880	0.033	0.086	0.167	0.645	0.017	0.066
<i>Scorpaena porcus</i>	C	B					0.167	0.645	0.003	0.010				
<i>Solea lascaris</i>	C	B	9.667	14.232	0.357	0.527	2.000	4.140	0.079	0.159	2.167	4.212	0.092	0.196
<i>Solea solea</i>	C	B	1.167	3.255	0.032	0.102	0.167	0.645	0.007	0.028	0.333	0.880	0.019	0.049
<i>Sphyaena sphyraena</i>	C	P	0.500	1.402	0.112	0.321	0.667	1.484	0.116	0.251	0.167	0.645	0.054	0.208
<i>Spicara flexuosa</i>	C	P	0.833	1.809	0.055	0.122	0.500	1.035	0.029	0.060	0.333	1.291	0.018	0.071
<i>Spicara maena</i>	C	P	0.167	0.645	0.009	0.036					0.167	0.645	0.012	0.047
<i>Spondyliosoma cantharus</i>	C	D	0.167	0.645	0.004	0.015								
<i>Stromateus fiatola</i>	C	P	0.333	1.291	0.089	0.343	0.333	0.880	0.072	0.191	0.167	0.645	0.086	0.334
<i>Trachurus mediterraneus</i>	C	P	5.500	16.669	0.447	1.222	4.333	10.916	0.336	0.715	4.167	12.125	0.259	0.766
<i>Trachurus trachurus</i>	C	P	0.167	0.645	0.035	0.137	0.833	2.616	0.157	0.553				
<i>Trachynotus ovatus</i>	C	P					0.167	0.645	0.016	0.062	0.167	0.645	0.003	0.011
<i>Umbrina cirrosa</i>	C	D	3.000	5.106	0.393	0.714	1.167	2.650	0.164	0.411	2.000	3.162	0.281	0.517
Total overall			644.833	404.894	15.934	13.966	362.167	313.945	10.900	15.1728	314.500	277.789	8.599	11.033
Number of species					48				35				36	