The following supplement accompanies the article

Revisiting the bioacoustics of European spiny lobsters *Palinurus elephas*: comparison of antennal rasps in tanks and *in situ*

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Supplement Table summarizing the data on the characterization of antennal rasps for spiny lobsters. Results given in these studies are presented as mean ± SD, when available. When the dimensions of the tanks used during the sound recordings were available, we estimated their minimum resonant frequencies using the equations of Akamatsu et al. (2002). Note that these are only estimates, because the effective heights of the tanks used are not always given by authors. They were used to compare with spectral features from the articles when available. NM: not mentionned. NA: not applicable. TP: technical problem due to tank reverberation. To be complete, we also added intensity features (SPL in dB; denoted with *) from Latha et al. (2005), Patek et al. (2009), Buscaino et al. (2011) and de Vicenzi et al. (2015). Unfortunately, these results are not comparable because they were obtained with different signal processing methods and the authors did not provide enough information to be able to re-estimate the values.

Reference	Species	Number of individuals	Carapace length (cm)	Site of sound recordings (m)	Distance from hydrophone (cm)	Protocol for eliciting antennal rasps	Antennal rasp features										
							Total duration (ms)	Single pulse duration (ms)	Time between pulses (ms)	Number of pulses per antennal rasp	Pulse rate (Hz)	SPL (dB re 1 μPa^2)	SL (dB re 1 μPa^2)	Estimated minimum resonant frequency (kHz)	1st peak Frequency (kHz)	2nd peak Frequency (kHz)	Bandwidth (kHz)
Moulton 1957	*P. argus*	NM	NM	Large naturalized aquarium	NM	Hand held	100	NM	NM	NM	Range 56-133	NM	NM	NA (tank dimensions NM)	0.80	2.50-4.70	Range 0.04–9.00
Hazlett & Winn 1962a	*J. longimanus*	2	9	Tank (0.5×0.5×5)	15	NM	55.1 (range 35.3-113.7)	NM	NM	NM	NM	NM	NM	2.13	Range 1.20-2.40	NM	Range 0.09-12.00
	P. guttatus	1	18.9	Tank (0.5×0.5×9)	15	Handheld	53.3 (range 26-72)	NM	NM	NM	NM	NM	NM	2.12	Range 1.20-2.40		Range 0.09-12.00
Hazlett & Winn 1962b	*P. argus*	NM	Range 6.4-10	Tank (0.5×0.5×9)	15	Handheld	92.6 (range 63-111)	NM	NM	NM	NM	NM	NM	2.12	Flat from 0.09 to 4.80		Range 0.09-12.00
	P. longipes	NM	Puerulus	Tank (0.5×0.5×4)	5	Handheld	20	NM	NM	NM	NM	NM	NM	2.83	NM	NM	Range 0.09-6.00
Meyer-Rochow & Penrose 1974	*P. longipes*	NM	Post puerulus larvae	Tank (0.5×0.5×0.4)	5	Handheld	70	NM	NM	NM	NM	NM	NM	2.83	Range 0.10-1.00 and 2.00-3.00	Range 5.00-7.00	Range 0.09-11.00
Meyer-Rochow & Penrose 1976	*P. longipes*	NM	Range 1-10	Tank (0.5×0.5×0.5)	5	Handheld	Range 60-220	NM	NM	Range 9-34	NM	NM	NM	2.83	TP	TP	TP
Mulligan & Fischer 1977	*P. argus*	25	NM	Tank (0.26m^3)	NM	Agonistic interactions	153 ± 54.7 (range 84-288)	22 ± 1.4	23 ± 1	6.6	NM	NM	NM	NA (tank dimensions NM)	2.30	3.40	Range 0.08-16.00
Patek 2001	*P. argus*	6	NM	NM	NM	NM	NM	NM	NM	NM	77	NM	NM	NM	NM	NM	NM
Patek 2002	*P. argus*	6	Range 4.7-9.7	Tank (1.32×0.79×0.64)	15	Handheld	103.7 ± 5.7 (range 19.2-331.6)	1.7 ± 0.03 (range 0.6-13)		6.9 ± 0.4 (Range 2-24)	76.7 ± 3.2 (range 24.1-218)	NM	NM	NM	NM	NM	NM
Patek & Oakley 2003	*P. elephas*	2	NM	NM	15	Handheld	101 ± 45.7	NM	NM	13.5 ± 5.4	138.5 ± 40.5	NM	NM	NM	NM	NM	NM
	P. Wagensis	1	NM	NM	15	Handheld	67.4 ±28.6	NM	NM	8.9 ± 4.5	129.4 ± 15.8	NM	NM	NM	NM	NM	NM
	P. japonicus	1	NM	NM	15	Handheld	155.1 ± 51.6	NM	NM	9.5 ± 5	61.4 ± 21	NM	NM	NM	NM	NM	NM
	J. japonica	1	NM	NM	15	Handheld	69.2 ± 47	NM	NM	8.2 ± 3.8	131.4 ± 23.4	NM	NM	NM	NM	NM	NM
	L. trigonus	1	NM	NM	15	Handheld	156.6 ± 42.7	NM	NM	17.9 ± 4	118.5 ± 31	NM	NM	NM	NM	NM	NM
	P. homarus	1	NM	NM	15	Handheld	89.5 ± 83	NM	NM	9.9 ± 8.6	120.6 ± 19.8	NM	NM	NM	NM	NM	NM
	P. longipes	1	NM	NM	15	Handheld	101 ± 66.5	NM	NM	11.4 ± 7.8	147.4 ± 17	NM	NM	NM	NM	NM	NM
	P. argus	4	NM	NM	15	Handheld	151.7 ± 82.3	NM	NM	7.2 ± 1.5	65.9 ± 27.4	NM	NM	NM	NM	NM	NM
Latha et al. 2005	*P. homarus*	NM	NM	Tank (4.3×1.3×1m)	< 50	NM	NM	NM	NM	NM	NM	Range 50.1-69.5 (peak amplitude) *	NM	0.96	26.10	52.60	Range 3.00-100.00

	P. waguensis	3	NM	Tank (4.3×1.3×1m)	< 50	NM	NM	NM	NM	NM	NM	Range 119.1-143.2 (peak amplitude) *	NM	0.96	3.30	52.12	Range 3.00-75.00
Patek & Baio 2007	*P. interruptus*	5	8.5-8.8	NM	NM	NM	NM	7.9 ± 2 (range 1.4-19.9)	NM	4.5 ± 0.9 (range 3-7)	87.6 ± 15.9 (range 55.4-136.7)	NM	NM	NM	NM	NM	NM
Patek et al. 2009	*P. interruptus*	19	4.4-10.2	Tank (1.5×0.8)	60	Handheld	108 ±35 (range 15-303)	TP	NM	7 ± 3 (2-19)	71.2 ± 20 (24 – 192)	NM	NM	NM	NM	NM	NM
	P. interruptus	20	50-113	Tank (1.5×0.8)	Range 31-66	Handheld	NM	NM	NM	NM	NM	NM	NM	1.012	1.79±0.34	1.80±0.303	NM
				In situ	31	Handheld	NM	NM	NM	NM	NM	NM	NM	NA	0.63±0.37	1.59±0.48	NM
	P. interruptus	13	65-93	*In situ*	Range 91-150	Handheld	NM	NM	NM	NM	NM	150.4±2 (peak amplitude) *	NM	NM	NM	NM	NM
Buscaino et al. 2011	*P. elephas*	25	18.3 ± 2.6 (total length)	Tank	NM	Predator interactions	90±50	TP	NM	9.5±4.5	118.2±54.4	119.8±8.4 (peak amplitude) *	NM	NA (tank dimensions NM)	19.52±6.70	NM	122.90±23.69
Kikuchi et al. 2014	*P. japonicus*	NM	NM	*In situ*	NM	In situ monitoring	40±20	NM	4±2	11.09±4.10	NM	NM	NM	NA	9.99±4.47	10.20±4.42	0.75±0.46
De Vicenzy et al. 2015	*P. elephas*	40	7.9±0.5	Tank (2.35×1.5)	NM	Response to sounds	70±20	NM	NM	8±3.5	134±37.1	124.6±6.3 (peak amplitude) *	NM	0.56	22.93±8.20	NM	127.20 ± 33.20
This study	***P. elephas***	**13**	**5.3±0.8 (range 4.2-7)**	**Tank (1.13×0.73×0.5)**	**Range 20-30**	**Handheld**	**120.5±26.0 (range 60-225)**	**TP**	**NM**	**15.0±3.3 (range 7-28)**	**127.9±21.1 (range 78.4-226.7)**	**171.0±3.1 (range 160.4-175.7) (peak-peak)**	**151.2±4.2 (range 139.7-159.6) (rms)**	**NA**	**1.94**	**3.99±3.68 (range 1.82-17.74)**	**5.34±4.27 (range 1.82-17.83)**	**5.13±2.51 (range 0.42-11.70)**
	P. elephas	**9**	**5.0±0.3 (range 4.1-5.4)**	***In situ***	**Range 20-50**	**Handheld**	**147.0±29.7 (range 53-266)**	**NM**	**NM**	**16.9±4.7 (range 6-33)**	**115.9±27.2 (range 59.4-208.9)**	**167.3±3.9 (range 156.0-175.7) (peak-peak)**	**139.2±3.0 (range 132.0-146.4) (rms)**	**Range 154.2-160.6 (peak-peak)**	**NA**	**0.77±0.24 (range 0.12-1.66)**	**0.96±0.40 (range 0.22-1.62)**	**16.99±5.38 (range 4.90-23.00)**

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