Supplementary Information

Figure S1. An aerial photograph of the southern coast of Eilat, showing the two study sites (A and B). Light polygons indicate a permanent location of a colony. Yellow rectangles indicate locations of video records performed. Site A - offshore from the lighthouse ~0.4 km southwest of the Interuniversity Institute for Marine Sciences in Eilat. At this site the colony occupied a stretch of slope 6 m to 12 m in depth, 92 m in length. Site B - ~0.7 km N.NE of Taba border crossing. At this site the colony was found on a slope between 5 m – 15 m, 233 m in total length, quasi-separated to three sub-groups. The density of eels at Site A was about half that of Site B (1.75±0.48 and 3.9±0.57 individuals/m^2, respectively).

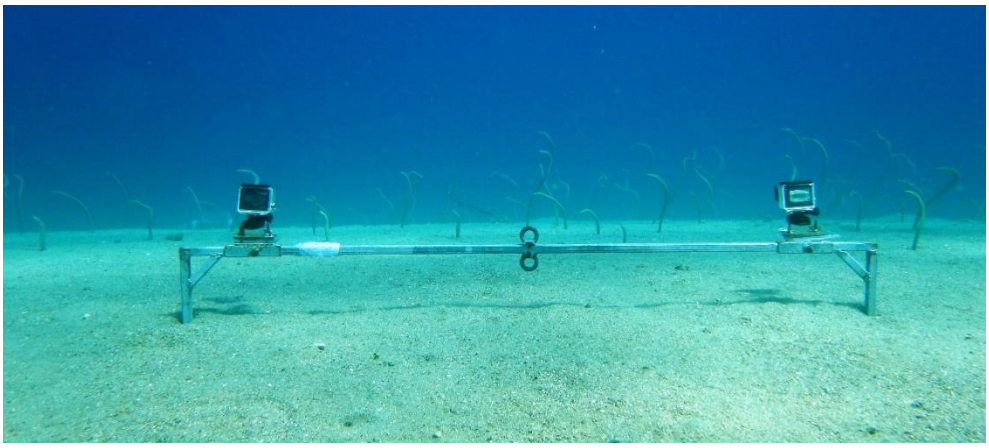


Figure S2. The underwater experimental setup. A stereo cameras system (two GoPro cameras, 2704x1524 pixels, 29.97 fps) for extracting three dimensional position data. The cameras were 1.8m apart, attached to a stand inserted in the sand. The cameras are directed towards a colony of garden eels at depth of 6 m.

Table S1: List of sessions recorded during the study and the sections within used

Date	Time	Location	Number of sections	Current speed range (cm/s)	
16/02/2016	06:25 – 07:22	Site A	4	3.3 – 7.0	
18/05/2016	15:40 – 16:44	Site B	8	3.5 – 9.6	
02/08/2016	08:29 – 09:26	Site A	4	5.4 – 24.1	*
09/08/2016	12:26 – 13:26	Site A	9	6.7 – 14.4	
22/08/2016	09:02 – 09:56	Site A	7	14.2 – 19.2	
23/08/2016	10:04 – 10:48	Site A	7	24.1 – 29.9	
05/09/2016	09:48 – 10:44	Site A	7	14.3 – 16.9	
21/09/2016	12:26 – 12:41	Site A	2	20.6 – 22.4	**
20/10/2016	10:59 – 11:55	Site A	10	14.9 – 19.9	
20/12/2016	13:49 – 14:44	Site B	8	3.1 – 9.0	
26/12/2016	07:59 – 08:55	Site B	2	4.8 – 8.6	

* Only two eels were analyzed in this session due to camera field of view limitations. The section with the current speed of 5.4 cm/s is shorter (01:07min) but was included in the analysis as it represents a significant change in the current speed during this session and allows examination of the same individuals at different current speeds.

** Shorter session was recorded due to camera failure.

Table S2: List of feeding rate experiments

Date	Time	Current Speed (cm/s)	Plankton Density (Prey/m^3)	Number of eels examined
14/10/2014	11:30	9.4	492.7	10
19/10/2014	18:00	3.9	323.7	10
22/10/2014	07:50	10.0	1227.0	10
04/11/2014	14:10	7.8	136.4	10
12/11/2014	13:15	6.3	69.902	10
10/12/2014	11:20	20.7	1176.7	10
21/12/2014	10:55	5.0	168.2	10
23/12/2014	10:10	14.2	1080.8	10
31/12/2014	13:25	14.7	1018.2	10
04/07/2017	08:30	9.1	21.8	29
05/07/2017	07:00	8.5	85.5	32
06/07/2017	07:50	7.9	29.9	17
11/07/2017	18:00	8.2	25.9	31
12/07/2017	08:00	6.7	95.2	29
13/07/2017	08:00	3.9	206.8	30
18/07/2017	07:55	9.4	54.1	23
19/07/2017	07:55	18.9	110.6	31
20/07/2017	07:55	11.7	37.9	29
25/07/2017	08:20	7.1	132.0	10
26/07/2017	08:10	5.3	51.6	16
27/07/2017	07:50	3.8	51.7	13

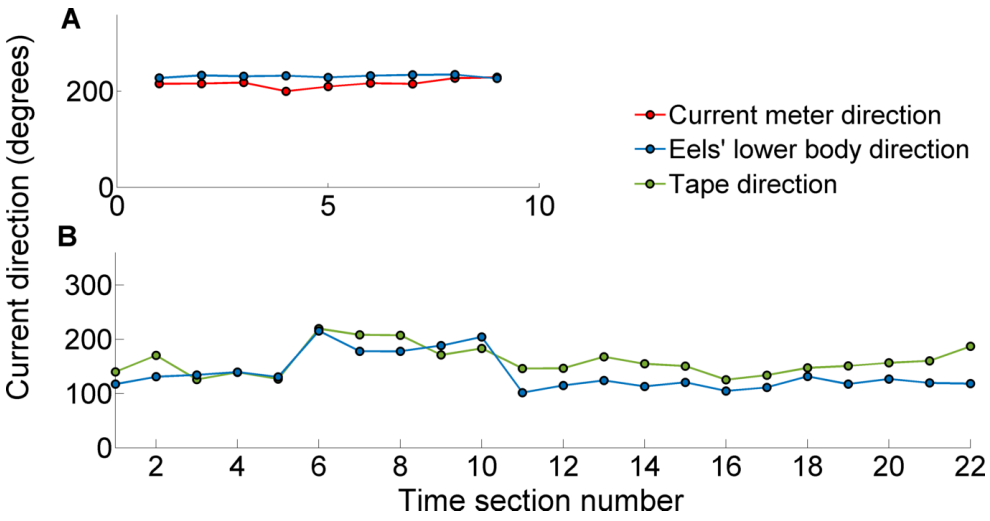


Figure S3. Comparison between the current direction calculated based on the inclination of the eel's lower body (10-20 cm from the burrow) and **(A)** current meter measurements under conditions of medium current speed (6.5-15 cm/s) and **(B)** measurements of the direction of a tape attached to a pole ~0.2 m above bottom for current speeds <6.5 cm/s. Each data point indicates the average direction of 3 individual eels each measured every 10 s during 3.5 min interval.

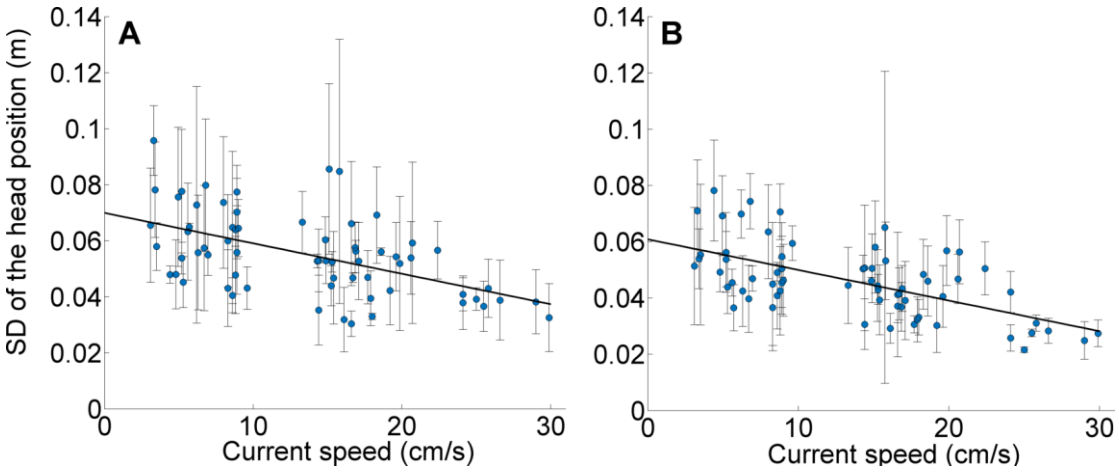
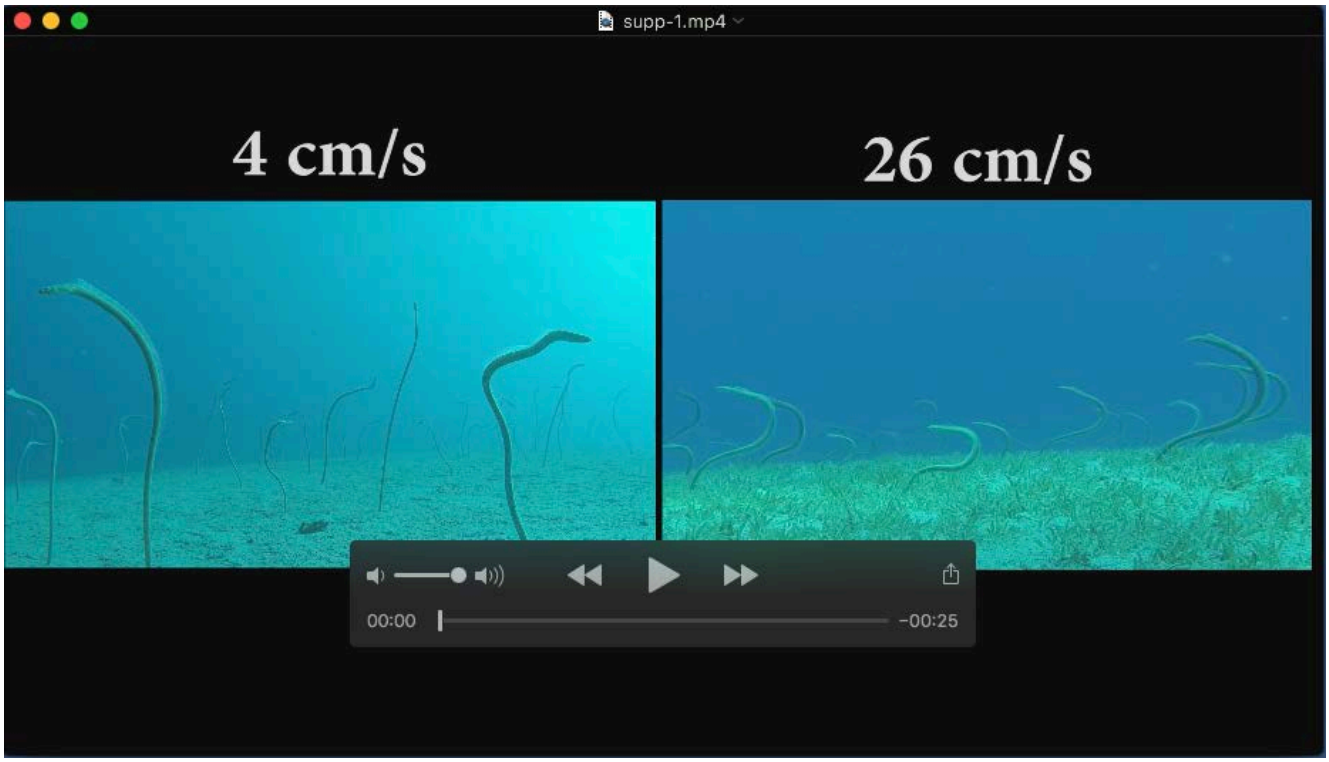


Figure S4. Standard deviation of the time varying position of the eels' head along: **(A)** horizontal axis perpendicular to the flow direction (R^2=0.28, N=66), and **(B)** vertical axis (R^2=0.37, N=67). Each data point indicates the average for the three eels in a section 3.5 min long. Error bars indicate the standard deviation among the three eels.



Movie 1. The flow-dependent changes in the feeding postures of the garden eel *Gorgasia sillneri*. A garden eel colony at 6 m depth in the northern Gulf of Eilat (Aqaba), Red Sea under condition of (left) weak current (4 cm/s) and (right) strong current (26 cm/s).