

THE DISTRIBUTION AND THE SIZE COMPOSITION OF *MYOXOCEPHALUS JAOK* CUVIER, 1829 AND *M. POLYACANTHOCEPHALUS* PALLAS, 1814 ON THE WEST COAST OF KAMCHATKA



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According to modern assessments, the biomass of the *Cottidae* family representatives on the west coast of Kamchatka is about 250 thous. t, where more than 70% are provided by two species - *Myoxocephalus jaok* and *Myoxocephalus polyacanthocephalus*.
Data on the size structure of *Cottidae* in the area of the research were limited, and hence having more data about distribution and size composition of two mentioned species is very important. The research carried out in June-July of 2017 on the west coast of Kamchatka was to compensate current gap.

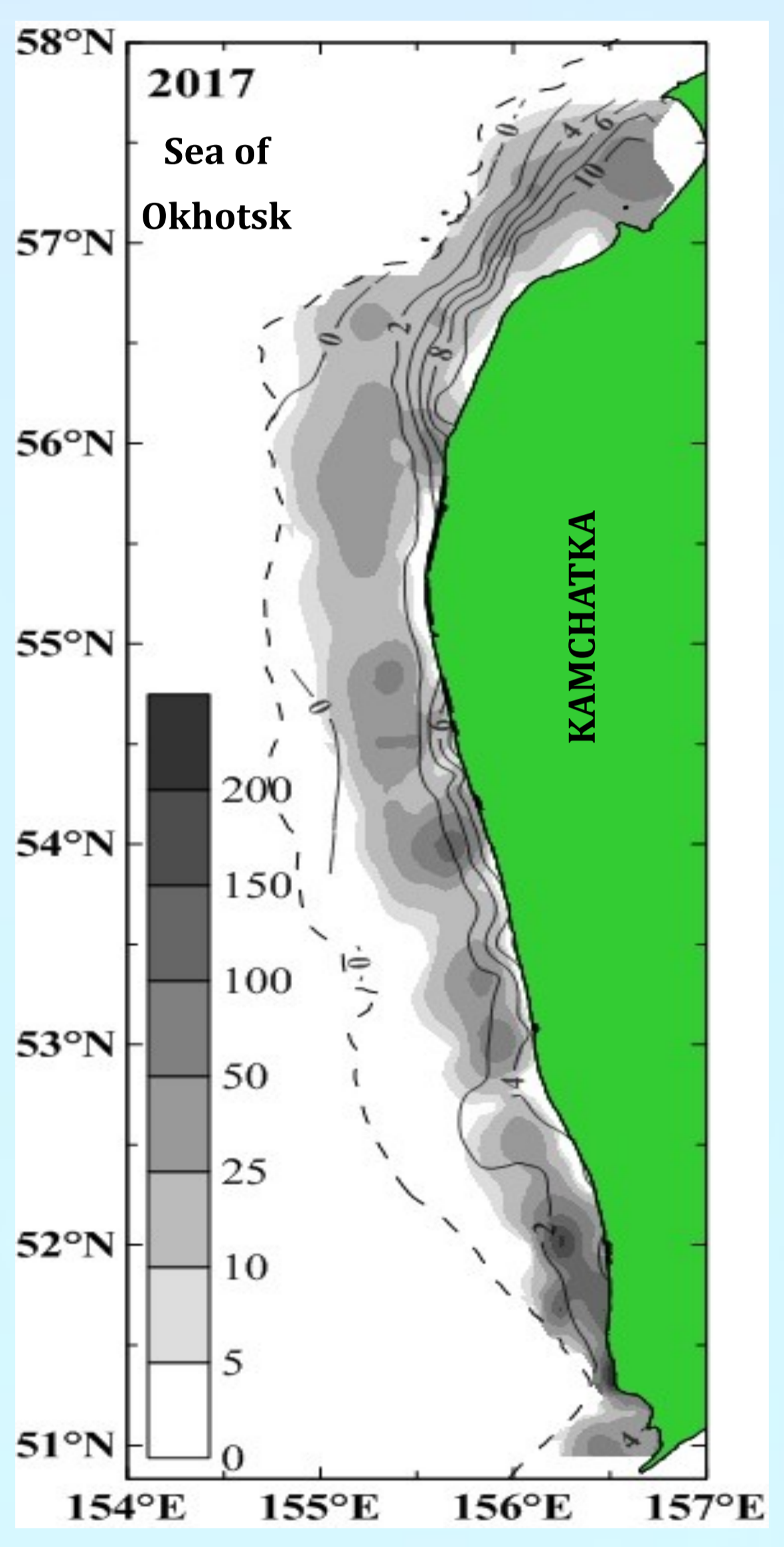


Fig. 1. Near the bottom temperatures and distribution of *M. jaok* on the west coast of Kamchatka in June-July of 2017.

On our data, *M. jaok* was observed most frequently at the depth from 75 m (min - 14 m, max - 123 m). The maximal catches per unit effort (CPUE) were at the depth from 50 m. (fig. 1.) About 70% of the catches of this species were at the temperatures 0 - 3°C near the bottom. (fig. 3.) Aggregations of mid and high density were observed everywhere along the coast. The body length varied as 9 - 65 cm (averaged 40.4 cm)(fig. 2.).



<i>Myoxocephalus jaok</i>	Depth range, m				
	<50	50-75	75-100	100-125	>125
Frequency, %	98,0	90,7	65,7	30,8	82,4
CPUE (mean), kg	80,1	52,3	17,5	7,4	61,7
SPUE (mean), indiv.	85	48	17	7	63
Mean weight, kg	0,942	1,090	1,029	1,057	0,979
Frequency, cases	99	39	23	8	169
Number of trawlings	101	43	35	26	205

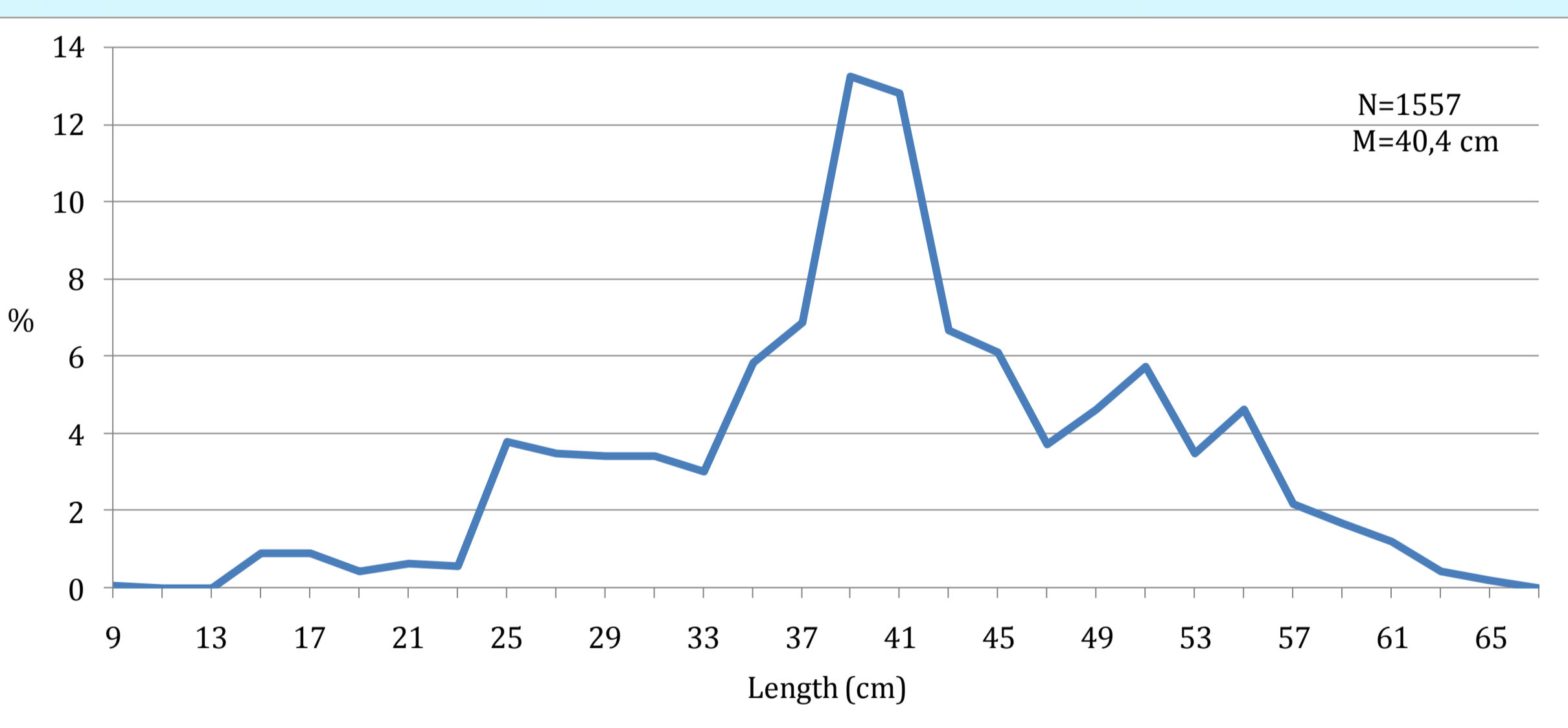


Fig. 2. The body length composition of *M. jaok* on the west coast of Kamchatka in June-July of 2017.

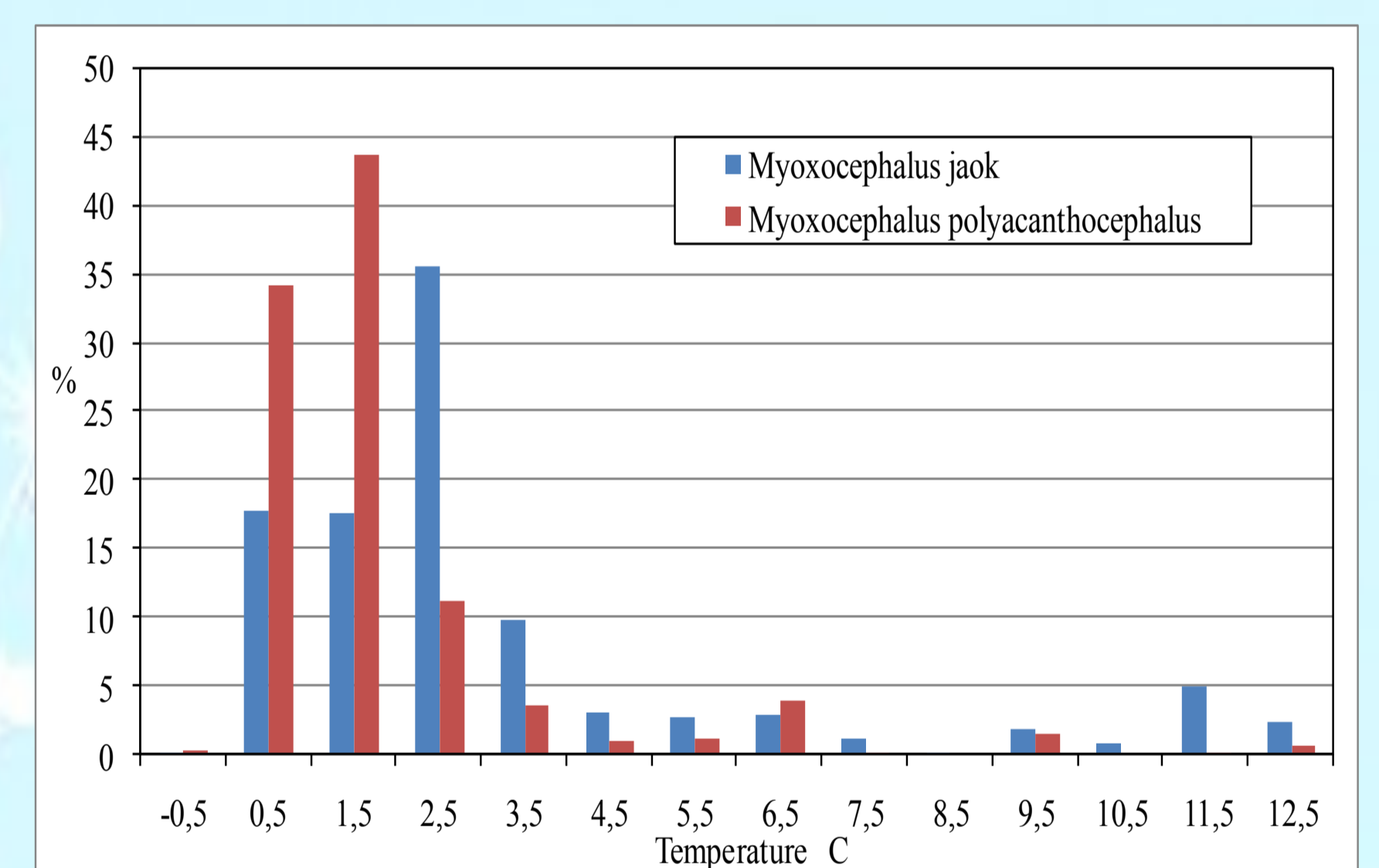


Fig. 3. The ratio between the catches (%) and the values of near the bottom temperatures on the west coast of Kamchatka in June-July of 2017.

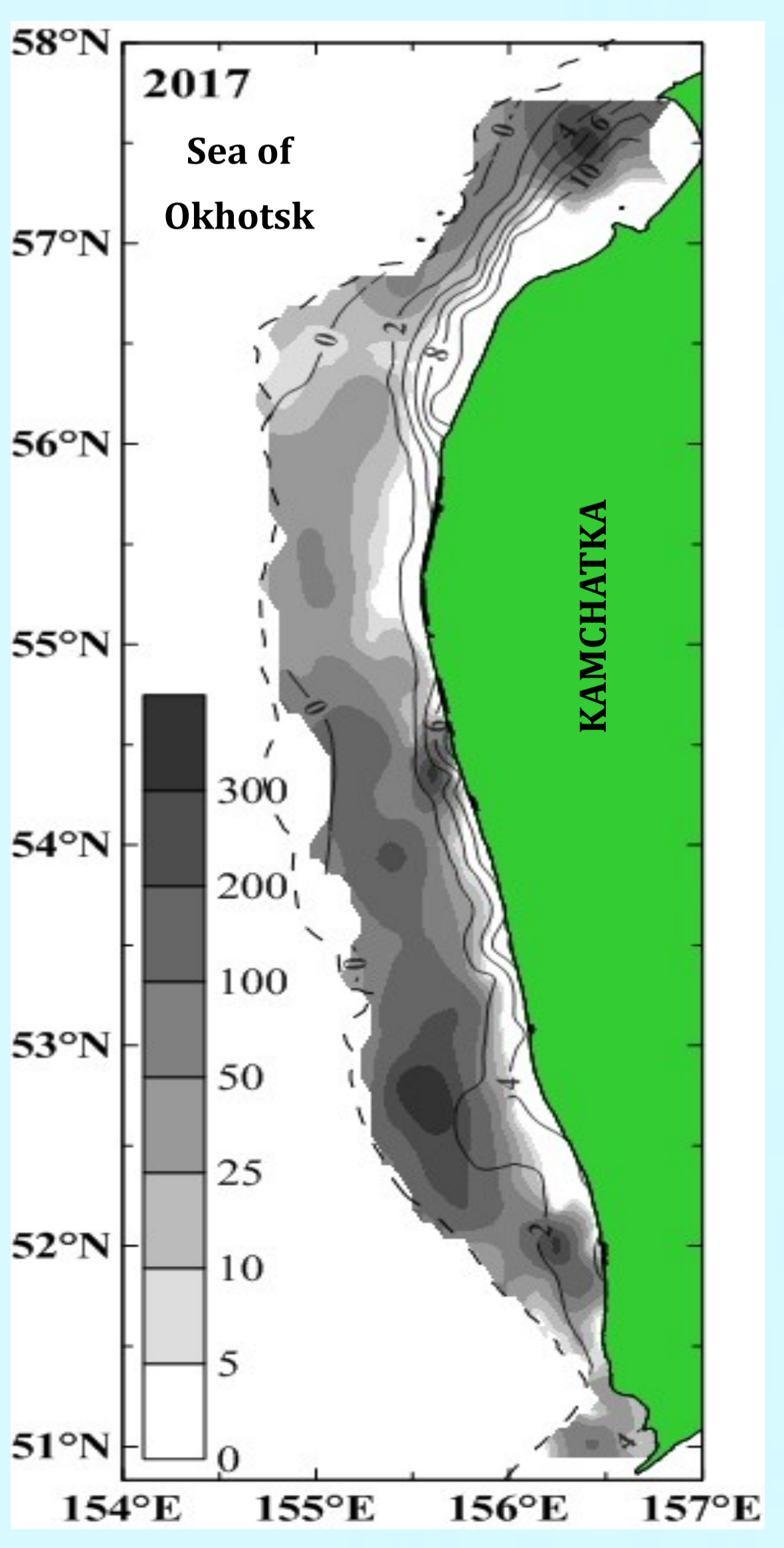


Fig. 4. Near the bottom temperatures and distribution of *M. polyacanthocephalus* on the west coast of Kamchatka in June-July of 2017.

M. polyacanthocephalus demonstrated the highest frequency at the depth range 50-250 m (min - 16 m, max - 356 m). The maximal CPUEs were observed at the depth range 50-150 m. (fig. 4.) Over 77% of the catches were in the area where the temperature near the bottom was from 0 to 2°C (fig. 3.) and aggregations of mid and high density were observed in the southern and northern parts of the shelf. The body length varied from 10 to 79 cm (averaged 40.1 cm)(fig. 5.).



<i>Myoxocephalus polyacanthocephalus</i>	Depth range, m				
	<50	50-150	150-250	250-360	>360
Frequency, %	60,4	99,1	90	70,8	80,4
CPUE (mean), kg	103	177,1	35,6	25,7	129,9
SPUE (mean), indiv.	98	91	15	9	80
Mean weight, kg	1,047	1,946	2,373	2,856	1,624
Frequency, cases	61	109	18	17	205
Number of trawlings	101	110	20	24	255

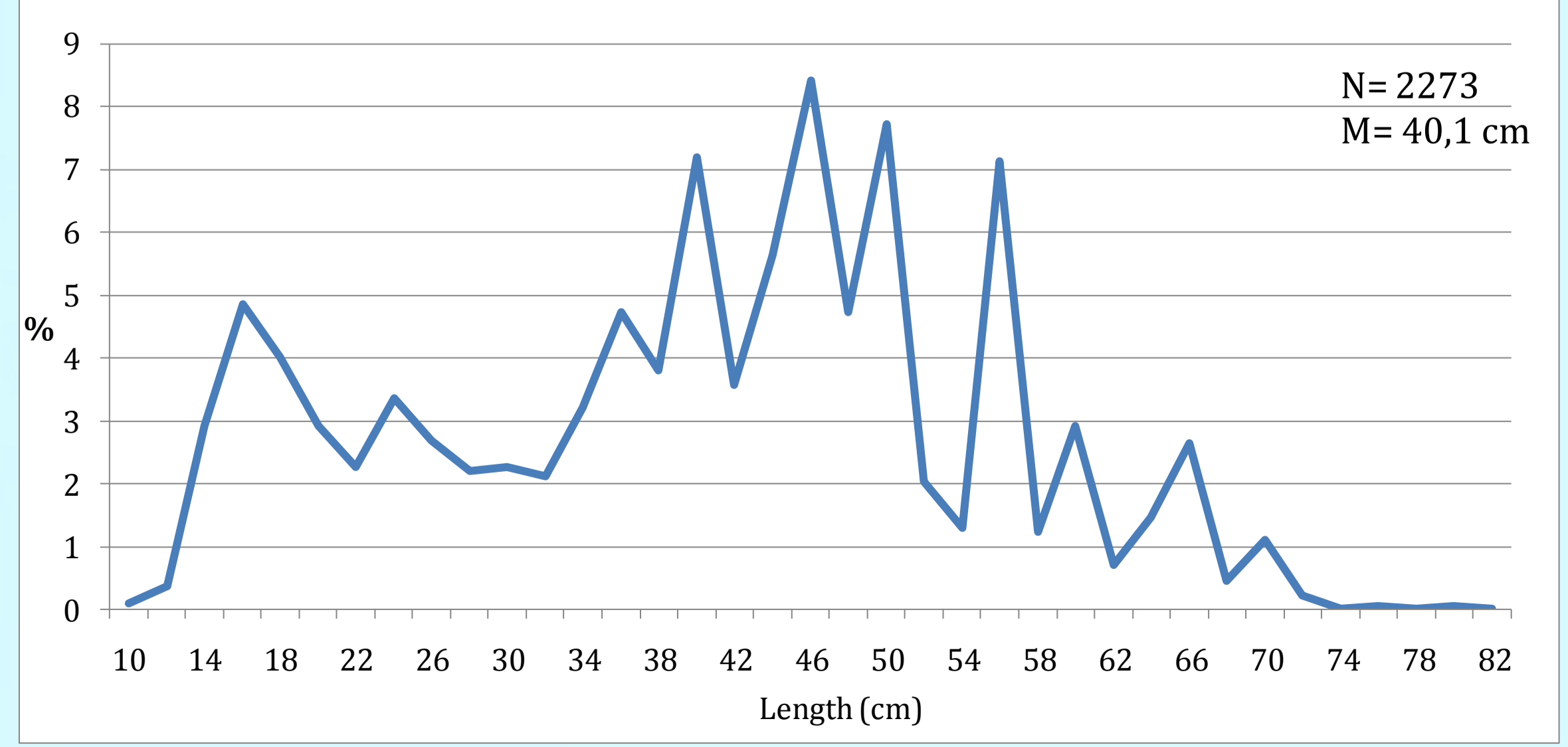


Fig. 5. The body length composition of *M. polyacanthocephalus* on the west coast of Kamchatka in June-July of 2017.

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