

TABLE II

Number of Dogfish Collected per Fishing Trip for each Week of the Summer Season

Week	1973	1974	1975	1976 ⁺	1977	1978	1979	Average ⁺⁺ 1973-1979	Average 1973-1975	Average 1977-1979
1 *	8	13	13	13	23	16	8	14 ± 6	11 ± 3	16 ± 7
2	18	31	9	17	32	7	14	18 ± 11	19 ± 11	17 ± 13
3	42	41	86	24	21	25	28	41 ± 24	56 ± 26	25 ± 4
4	69	48	31	29	48	25	39	43 ± 16	49 ± 19	37 ± 12
5	84	52	62	39	52	41	31	49 ± 24	66 ± 16	32 ± 19
6	50	55	53	30	33	26	10	38 ± 18	53 ± 2	23 ± 12
7	98	87	72	27	61	53	46	70 ± 20	86 ± 13	53 ± 8
8	65	62	54	38	37	75	27	53 ± 18	60 ± 6	46 ± 25
9	61	50	61	24	36	32	43	47 ± 12	57 ± 6	37 ± 5
10	53	29	35	6	41	25	32	36 ± 10	39 ± 13	32 ± 8
11 **	8				6	40	12			

* Week number 1 includes all collecting trips during the month of June.

** Week number 11 includes all the collecting trips during the month of September.

⁺ The number shown for the year 1976 depict only those fish delivered to individual investigator live cars. The total number collected was not available.⁺⁺ Does not include the 1976 numbers.

CLEFTAGE OF EGGS IN WHICH THE POLAR REGIONS ARE SIMULTANEOUSLY MANIPULATED

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Although a pair of asters located within some critical distance of each other and of the surface suffice for establishment of an active division furrow, the surface region upon which their influence is brought to bear has not been rigorously demonstrated. The polar and the equatorial surfaces are likely alternatives, but a long sequence of published investigations has failed to demonstrate any necessary geometrical relationship between the mitotic apparatus (MA) and the poles, whereas interference with the normal geometrical relation between the MA and the equator can affect division. To further explore this problem, a technique for simultaneously manipulating the poles of pre-division cells was devised. When the 150 μ m diameter egg is slipped into a glass ring about 100 μ m i.d. and about 100 μ m long, the egg is distorted into a cylinder, the rounded ends of which protrude from the ring. The cylindrical egg form positions the MA so that the cell divides across its shortest axis, and the glass ring immobilizes the egg during manipulation. Thus when the egg and ring are properly arranged on the operation chamber floor, both poles are accessible and fixed. Neither agitation of the polar regions nor deforming them with conical tools so that the pole is pushed into the astral centers interferes with establishment or operation of the division. Division mechanisms are also unaffected by aspiration of cytoplasm from between the asters and the poles or aspiration of the polar portions of the asters. Techniques for injecting large oil drops between the polar surfaces and the asters are being developed. Thus far, furrow establishment and function appear undisturbed by drastic manipulations in the polar regions. This investigation was supported by National Science Foundation Grant PCM 74-18380A02