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TABLE No. 1.—Samples, investigated regarding race-characters.

|                                                        | West-Coast,<br>N.F. | Magdalen<br>Islands. | Northumber-<br>land Straits. | West Ardoise,<br>N.S. | Lockeport,<br>N.S. | Bay of Fundy. | Gloucester,<br>Mass. |
|--------------------------------------------------------|---------------------|----------------------|------------------------------|-----------------------|--------------------|---------------|----------------------|
| When caught .....                                      | Fall 1914           | May 1914             | 21 May<br>1914.              | 10 August<br>1914.    | Fall 1914          | Fall 1914     | Fall 1914            |
| Number of ind .....                                    | 75                  | 55                   | 52                           | 55                    | 50                 | 54            | 50                   |
| Average lengths .....                                  | 30.5                | 30.2                 | 29.42                        | 29.48                 | 28.24              | 18.8          | 17.2                 |
| Per cent of ♂ .....                                    | 41.3                | 45.5                 | 39.1                         | 68.6                  | 50                 | ?             | ?                    |
| Per cent of ♀ .....                                    | 58.7                | 54.5                 | 60.9                         | 31.4                  | 50                 | ?             | ?                    |
| Average stage of sex. org. ....                        | 3-4                 | 5                    | 5                            | 4-5                   | 5-6                | 1             | 1                    |
| Average of fat .....                                   | 1                   | 0                    | 0                            | 1                     | 0                  |               |                      |
| Fall (F.) or Spring (S) .....                          |                     |                      |                              |                       |                    |               |                      |
| Spawners .....                                         | S                   | S.                   | S.                           | F.                    | F.                 | F. (?)        | F.                   |
| Average number Dorsal rays ..                          | 20                  | 18.3                 | 18.27                        | 18.58                 | 20.28              | 18.7          | 19.9                 |
| Average number Anal rays ..                            | 17.9                | 16.6                 | 16.7                         | 17.33                 | 18.46              | 17.6          | 18.1                 |
| Average number Keel Scales ..                          | 12.6                | 12.64                | 12.5                         | 12.85                 | 12.88              | 14.08         | 13.4                 |
| Number of first vertebra<br>with closed normal arch .. | 25                  | 25.3                 | 25.2                         | 25.5                  | 25.2               | 25            | 24.8                 |
| Total number of vertebrae ..                           | 56.83               | 56.52                | 56.27                        | 56.63                 | 56.54              | 56.46         | 56.68                |

The herrings from the west coast of Newfoundland are spring spawners. The sample collected in the fall, 1914, had therefore sexual organs in development (stages 3 to 4, and medium development of fat). They were of large size, varying from 28 to 34, average 30.5. Number of dorsal fin rays varied from 18 to 22, average 20; anal fin rays from 16 to 20, average 18; keel scales from 11 to 14, average 12.6; total number of vertebrae from 55 to 59, average 56.83; first vertebrae with hæmal arch, average number, 25.

The sample from Magdalen islands, caught in May, 1914, consisted of spawning individuals from 27 to 32 cm. in length, average 30.2. Number of dorsal rays from 17 to 20, average 18.3; anal rays 15 to 18, average 16.6; keel scales 11 to 14, average 12.54; vertebrae 55 to 58, average 56.52; number of first hæmal vertebrae, 25.3.

The Northumberland Strait herring, caught in May, were also spawning; length from 27 to 33, average 29.42. Number of dorsal rays from 16 to 20, average 18.27; anal rays 15 to 19, average 16.7; keel scales 11 to 15, average 12.5; vertebrae 55 to 58, average 56.27; first hæmal vertebrae, number 25.2.

The sample from West Ardoise (Atlantic coast of Cape Breton) consists of individuals from 26 to 35 centimetres in length, average 29.48. The sample was caught on the 10th of August, 1914, the genital organs were developing (stages 4 and 5), which shows that these would have spawned during the fall. Dorsal rays 17 to 20, average 18.53; anal rays 15 to 19, average 17.33; keel scales 12 to 14, average 12.85; total number of vertebrae 55-58, average 56.63; first hæmal vertebra, number 25.5.

The sample from Lockeport (Atlantic coast of Nova Scotia) contained individuals from 25 to 34 centimetres of length. The sample did apparently consist of a mixture of mature and immature individuals, the stages of the sexual organs being as follows:—

Stage 2 (immature): 4.

Stages 5 and 6 (spawning or near spawning): 23.

Stage 7 (spents): 13.

The sample was taken in the fall, 1914, showing that the herrings spawn in the fall. Dorsal rays 19 to 22, average 20.28; anal rays 17 to 21, average 18.46; keel scales 11 to 14, average 12.88; total number of vertebrae 55-57, average 56.54; first hæmal vertebra number 25.2.