CONTENTS

CHAPTER I

INTRODUCTORY

General Review of the Resources of the Sea and the Influence of Man thereon ................................................. 1

CHAPTER II

Remarks on the Scientific Report to the Royal Commission on Trawling (1884) ..................................................... 34
   a. Effects of Trawling on the Invertebrate Fauna .................. 47
   b. Effects of the Hooks of the Liners on the same grounds .... 57
   c. Effects of the Trawl on the Eggs of Fishes, on certain ground-fishes, and on very young fishes on or near the bottom . 61

The Recommendations of the Royal Commission on Trawling (1883–85), and the method adopted by the Fishery Board for Scotland in carrying them out .................................................. 65

Closure of Areas .................................................................. 65

Changes in the Trawling-vessels and their Apparatus .......... 73

Changes in the Line-boats and their Apparatus .................. 91

The present state of the Line and the Trawl Fisheries in relation to the Fishing-Grounds and the Fishes .................. 94

Captures by Liners and Trawlers ........................................ 98

Trawling ships and Areas and present condition of the Fishing-Grounds ......................................................... 130

CHAPTER III

GENERAL CONDITION OF THE FISHERIES IN ST ANDREWS BAY (p. 140)

INVESTIGATIONS IN ST ANDREWS BAY, 1886–96 (p. 147)

DECENNIAL SUMMARY (p. 168)

CHAPTER IV

INVESTIGATIONS IN FRITH OF FORTH, 1886–96 (p. 177)

DECENNIAL SUMMARY (p. 205)

CHAPTER V

INVESTIGATIONS IN MORAY FRITH, 1887–97 (p. 235)
CONTENTS

CHAPTER VI
INVESTIGATIONS IN FRITH OF CLYDE, 1888–97 (p. 262)

CHAPTER VII
SUMMARY AND CONCLUSIONS (p. 269)

CHAPTER VIII
THE INTERNATIONAL INVESTIGATIONS (p. 304)
BRITISH SOUTHERN SECTION (p. 316)
BRITISH NORTHERN SECTION (p. 321)
HYDROGRAPHICAL DEPARTMENT (p. 333)

TABLES
Tables I-XXXII are available for download from www.cambridge.org/9781107662872

ST ANDREWS BAY

I. Hauls during the months of the first and second quinquennial periods, and number in colder and warmer months.

II. Number of saleable fishes per month 1886–95.

III. Number of unsaleable fishes per month 1886–95.

IV. Average per haul at each station; average at all stations &c.

V. Totals of each species per year, 1886–95, and average of the plaice, dab, haddock and gurnard.

VI. Saleable fishes in monthly lists (with sizes) 1886–95.

VII. Immature and unsaleable fishes in monthly lists (with sizes) 1886–95.

FRITH OF FORTH

VIII. Hauls during the first and second quinquennial periods, and number in colder and warmer months.

IX. Average per haul at each station, totals—saleable and unsaleable, and averages.

X. Average per haul, or total numbers, of saleable and unsaleable fishes of each species 1886–95.

XI. Saleable fishes in monthly lists (with sizes) 1886–95.

XII. Immature and unsaleable fishes in monthly lists (with sizes) 1886–95.
TABLES XV

MORAY FRITH

XIII. Saleable fishes off Coast of Caithness and Smith Bank, 1884.
XIV. Unsaleable fishes off Coast of Caithness and Smith Bank, 1884.
XV. Saleable fishes outside Moray Frith, 1898.
XVI. Immature (unsaleable) fishes outside Moray Frith, 1898.
XVII. Saleable in monthly lists (with sizes), Stations I to VI, 1887-97.
XVIII. Unsaleable (chiefly immature) fishes in monthly lists (with sizes),
        Stations I to VI, 1887-97.
XIX. Hauls during the months of the first period (five years) and second
     period (six years), and number in warmer and colder months,
     Stations I to VI.
XX. Average per haul at each station (I to VI), and average at all
    stations &c.
XXI. Totals of each species per year 1887-97, and average of the plaice,
     dab, haddock and gurnard, Stations I to VI.
XXII. Saleable fishes in monthly lists (with sizes), Stations VII to XVI,
      1883-97.
XXIII. Unsaleable fishes in monthly lists (with sizes), Stations VII to XVI,
       1883-97.
XXIV. Hauls during the months of the quinquennial period 1893-97,
       Stations VII to XVI.
XXV. Average per haul at each Station, average at all Stations per year,
     &c., Stations VII to XVI.
XXVI. Totals of each species per year, and averages of certain fishes,
       Stations VII to XVI.

FRITH OF CLYDE

XXVII. Saleable fishes in monthly lists (with sizes), 1888-90, 1895, 1896,
       1897.
XXVIII. Unsaleable (chiefly immature) fishes in monthly lists (with sizes),
        1888-90, 1895, 1896, 1897.
XXIX. Hauls during the months of the quinquennial period.
XXX. Totals of each species per year and averages of certain species.
XXXI. Average per haul at each Station, totals, and average per haul at
      all Stations.
XXXII. Comparison of day- and night-hauls, 1896 and 1897.
# LIST OF PLATES

<table>
<thead>
<tr>
<th>Plate Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blue Shark</td>
<td></td>
</tr>
<tr>
<td>The Gatty Marine Laboratory in summer</td>
<td></td>
</tr>
<tr>
<td>The Gatty Marine Laboratory in winter</td>
<td></td>
</tr>
<tr>
<td>End-view of a vessel with otter-trawls on board</td>
<td></td>
</tr>
<tr>
<td>Wing of otter-trawl at stern of ship</td>
<td></td>
</tr>
<tr>
<td>Baiting crab pots on St Andrews “slip”</td>
<td></td>
</tr>
<tr>
<td>Hand-apparatus (“Champion”) for the hauling of herring-nets</td>
<td></td>
</tr>
<tr>
<td>Baiting the line</td>
<td></td>
</tr>
<tr>
<td>Ordinary Fishing-boat in Aberdeen Harbour</td>
<td></td>
</tr>
<tr>
<td>Repairing the lines</td>
<td></td>
</tr>
<tr>
<td>Wife of fisherman carrying home line in basket</td>
<td></td>
</tr>
<tr>
<td>Aberdeen Fish-Market at 5 a.m., August, 1898</td>
<td></td>
</tr>
<tr>
<td>“Shelling” mussels</td>
<td></td>
</tr>
<tr>
<td>St Andrews from the Pier</td>
<td></td>
</tr>
<tr>
<td>The sailing-boat ‘Dalhousie’ of the Gatty Marine Laboratory with her “crew” on board</td>
<td></td>
</tr>
<tr>
<td>Mending herring-nets</td>
<td></td>
</tr>
<tr>
<td>Lateral view of a Trawler in Aberdeen Harbour</td>
<td></td>
</tr>
<tr>
<td>The old (wooden) St Andrews Marine Laboratory</td>
<td></td>
</tr>
<tr>
<td>An oblique view of the Gatty Marine Laboratory from the land-face (west)</td>
<td></td>
</tr>
</tbody>
</table>