

# B R E V I O R A

## Museum of Comparative Zoology

---

CAMBRIDGE, MASS.

31 MARCH, 1969

NUMBER 313

---

### LOUIS AGASSIZ'S NUMBERS FOR STEAMER BLAKE STATIONS OF 1877-78, 1878-79

Myvanwy M. Dick

ABSTRACT. Correct *Blake* station numbers corresponding to Roman numerals used by Louis Agassiz for specimens collected by the *Blake*, 1877-1878, 1878-1879.

Eschmeyer (1965) demonstrated that frequent errors in locality data for fishes taken during *Blake* expeditions, 1877-1879, have been included in several major published works on fishes and in the fish catalogue, U. S. National Museum. These errors were caused by interpreting as station numbers Roman numerals included with the specimens — numerals intended for other purposes. For example, Goode and Bean (1896: 296-297) reported *Calionymus himantophorus* from *Blake* Station XXX and used data for that station for the station list. "XXX," however, is a number applied to the specimen, apparently by L. Agassiz, the correct station number being 274. Eschmeyer's account of these errors and their perpetuation is excellent and correct, but as no catalogue relating Agassiz's Roman numeral designation to true *Blake* Station numbers was known to exist, the resulting specific published errors could be corrected only with difficulty and in many instances not at all.

In collating early papers and catalogues relating to the Fish Department of the Museum of Comparative Zoology, a special catalogue of deep sea fish from the *Blake* expedition was found. Judging by the handwriting, this was prepared by Louis Agassiz. This contains the Roman numerals, which had been incorrectly interpreted as *Blake* Station numbers, and corresponding *Blake* Stations and localities. Each number was apparently intended to apply to a specific fish. Occasionally, in the *Blake* catalogue of 1878-1879, the same number is given in pencil as "Duplicate," with a different *Blake* Station. Presumably this would indicate fish of the same species but a different locality. This presents the



possibility of questionable localities for specimens having just the Agassiz numbers, such as "Agassiz V," which would allow seven localities under "duplicate Agassiz V."

In the Agassiz catalogue of the *Blake* expedition of 1877-1878 the Roman numeral is not always accompanied by a *Blake* Station number; however a locality is given, except in a very few instances where there are entries with "no locality."

Several specimens from the *Blake* collections were sent to Steindachner in Vienna for examination. These were assigned numbers from the Agassiz catalogue with their locality, but the *Blake* Station numbers were omitted. Hence material described by Dr. Steindachner would have the Agassiz number and correct locality but would not include a *Blake* Station number.

In general, however, Agassiz's holograph catalogue can be used to relate his Roman numeral designations to *Blake* Station numbers and hence to the correct data as published by Pierce and Patterson (1870), Agassiz (1881), and Smith (1889). Agassiz's catalogue is reproduced below.

#### LITERATURE CITED

AGASSIZ, A.

1881. List of dredging stations occupied during the year 1880 by the U.S. Coast Survey Steamer "Blake." *Bull. Mus. Comp. Zool.*, **8** (4): 95-98.

ESCHMEYER, W. N.

1965. Station data errors for fishes collected by the Steamer *Blake*. *Copeia*, **2**: 236-238.

GOODE, G. B., and T. H. BEAN

1896. Oceanic ichthyology. *Mem. Mus. Comp. Zool.*, **22**: 1-553.

PIERCE, B., and C. P. PATTERSON

1879. List of dredging stations occupied by the United States Coast Survey steamers "Corwin," "Bibb," "Hassler," and "Blake," from 1867 to 1879. *Bull. Mus. Comp. Zool.*, **6** (1): 1-15.

SMITH, S.

1889. Lists of the dredging stations of the U. S. Fish Commission. *Ann. Rept. Comm. Fish Fish.* (1886): 873-1017.

(Received 6 December 1968.)

## CAT. DEEP SEA FISH BLAKE EXP. 1878-79

<i>Present Number</i>	<i>Dredge Number</i>	<i>Depth fms.</i>	<i>Localities</i>	<i>Number of Specimens</i>
I	276	94	off Barbados	1
II	278	69	off Barbados	1
III	230	464	off St. Vincent	1
IV	274	209	off Barbados	1
IV dup.	147	250	off St. Kitts	1
V	240	164	off Grenadines	1
V dup.	264	416	off Grenada	1
V dup.	153	303	off Montserrat	1
V dup.	222	422	off St. Lucia	1
V dup.	258	159	off Grenada	1
V dup.	260	291	off Grenada	1
V dup.	150	375	off Nevis	1
V dup.	185	333	off Dominica	1
VI	290	73	off Barbados	1
VII	148	208	off St. Kitts	1
VIII	262	92	off Grenada	1
VIII dup.	116	150	off Jamaica	1
VIII dup.	290	73	off Barbados	1
IX	281	288	off Barbados	1
IX dup.	274	209	off Barbados	6
IX dup.	275	218	off Barbados	1
IX dup.	148	208	off St. Kitts	1
X	290	78	off Barbados	1
X dup.	297	123	off Barbados	1
XI	210	191	off Martinique	1
XII	142	27	off Flannegans Passage	1
XIII	248	161	off Grenada	1
XIV	176	391	off Dominica	1
XIV dup.	227	573	off St. Vincent	1
XIV dup.	285	159	off Grenada	1
XIV dup.	236	1591	off Bequia	2
XV	148	208	off St. Kitts	1
XVI	281	288	off Barbados	1
XVII	275	218	off Barbados	1
XVIII	274	209	off Barbados	1
XVIII dup.	274	209	off Barbados	1
XIX	297	123	off Barbados	1
XX	142	27	Flannegans Passage	1
XXI	167	175	off Guadeloupe	1
XXII	147	250	off St. Kitts	1
XXIII	147	250	off St. Kitts	1
XXIV	191	108 to 250	off Dominica	1
XXV	293	82	off Barbados	1



<i>Present Number</i>	<i>Dredge Number</i>	<i>Depth fms.</i>	<i>Localities</i>	<i>Number of Specimens</i>
XXVI	220	116	off St. Lucia	1
XXVII	231	95	off St. Vincent	1
XXVIII	293	82	off Barbados	1
XXIX	293	82	off Barbados	1
XXX	274	209	off Barbados	1
XXX dup.	281	288	off Barbados	1
XXX dup.	274	209	off Barbados	7
XXX dup.	258	159	off Grenada	1
XXX dup.	291	200	off Barbados	3
XXXI	273	103	off Barbados	1
XXXII	261	340	off Grenada	1
XXXIII	132	115	off Santa Cruz	1
XXXIV	253	92	off Grenada	1
XXXV	136	508	off Santa Cruz	1
XXXV dup.	221	423	off St. Lucia	1
XXXV dup.	284	347	off Barbados	1
XXXVI	280	221	off Barbados	1
XXXVII	151	365	off Nevis	1
XXXVIII	212	317	off Martinique	
			with parasite	1
XXXIX	121	2393	off Santa Cruz	1
XL	200	472	off Martinique	1
XLI	185	333	off Dominique	1
XLII	211	357	off Martinique	1
XLII dup.	222	422	off St. Lucia	3
XLII dup.	212	317	off Martinique	1
XLII dup.	151	365	off Nevis	3
XLII	288	399	off Barbados	1
XLII dup.	260	291	off Grenada	2
XLII dup.	221	423	off St. Lucia	1
XLII dup.	260	291	off Grenada	4
XLII dup.	150	375	off Nevis	3
XLII dup.	261	340	off Grenada	1
XLIII	266	461	off Grenada	1
XLIV	248	161	off Grenada	1
XLV	104	500	Old Bahama Channel	3
XLV dup.	104	500	Old Bahama Channel	10 ±
XLVI	271	458	off Bequia	1
XLVII	188	372	off Dominica	3
XLVIII	227	573	off St. Vincent	1
XLIX	221	423	off St. Lucia	1
XLIX dup.	221	423	off St. Lucia	1
XLIX dup.	190	524	off Dominica	2
L	227	573	off St. Vincent	1
LI	148	208	off St. Kitts	1

LII	275	218	off Barbados	1
LII dup.	275	218	off Barbados	2
LII dup.	147	250	off St. Kitts	1
LII dup.	281	288	off Barbados	1
LIII	295	180	off Barbados	2
LIII dup.	295	180	off Barbados	20
LIII dup.	281	288	off Barbados	14
LIII dup.	291	200	off Barbados	3
LIII dup.	274	209	off Barbados	4
LIII dup.	275	218	off Barbados	2
LIV	283	237	off Barbados	1
LV	262	92	off Grenada	1
LVI	231	95	off St. Vincent	1
LVII	132	115	off Santa Cruz	1
LVII dup.	132	115	off Santa Cruz	2
LVIII	129	314	off Santa Cruz	1
LIX	281	288	off Barbados	1
LX	297	123	off Barbados	1
LXI	249	262	off Grenada	1
LXII	274	209	off Barbados	1
LXIII	274	209	off Barbados	1
LXIII dup.	275	218	off Barbados	2
LXIII dup.	274	209	off Barbados	2
LXIII dup.	172	62 to 108	off Guadeloupe	1
LXIV	297	123	off Barbados	1
LXV	297	123	off Barbados	1
LXV dup.	297	123	off Barbados	2
LXVI	235	1507	off Bequia	1
LXVII	222	422	off St. Lucia	1
LXVII	222	422	off St. Lucia	1
LXVIII	160	393	off Guadeloupe	1
LXVIII dup.	137	625	off Santa Cruz	1
LXVIII dup.	151	365	off Nevis	1
LXIX	161	583	off Guadeloupe	1
LXX	163	769	off Guadeloupe	1
LXX dup.	163	769	off Guadeloupe	2
LXXI	163	769	off Guadeloupe	1
LXXII	230	464	off St. Vincent	1
LXXIII	200	472	off Martinique	1
LXXIV	295	180	off Barbados	1
LXXIV dup.	291	200	off Barbados	1
LXXV	281	288	off Barbados	1
LXXV dup.	281	288	off Barbados	1
LXXV dup.	260	291	off Grenada	1
LXXVI	265	576	off Grenada	1
LXXVI dup.	265	576	off Grenada	1
LXXVI dup.	288	399	off Barbados	1



<i>Present Number</i>	<i>Dredge Number</i>	<i>Depth fms.</i>	<i>Localities</i>	<i>Number of Specimens</i>
LXXVII	151	365	off Nevis	1
LXXVII dup.	151	365	off Nevis	1
LXXVII dup.	222	422	off St. Lucia	1
LXXVII dup.	260	291	off Grenada	1
LXXVII dup.	150	375	off Nevis	3
LXXVII dup.	135	450	off Santa Cruz	2
LXXVII dup.	185	333	off Dominica	1
LXXVIII	291	200	off Barbados	1
LXXVIII dup.	291	200	off Barbados	1
LXXIX	274	209	off Barbados	1
LXXIX dup.	274	209	off Barbados	1
LXXIX dup.	291	200	off Barbados	1
LXXIX dup.	193	169	off Martinique	1
LXXIX dup.	149	60 to 180	off St. Kitts	1
LXXIX dup.	146	245	off St. Kitts	1
LXXX	200	472	off Martinique	1
LXXX dup.	200	472	off Martinique	1
LXXX dup.	175	618	off Dominica	1
LXXX dup.	227	573	off St. Vincent	1
LXXX dup.	135	450	off Santa Cruz	1
LXXX dup.	163	769	off Guadeloupe	1
LXXX dup.	227	573	off St. Vincent	1
LXXXI	151	365	off Nevis	1
LXXXI dup.	151	365	off Nevis	1
LXXXII	205	334	off Martinique	1
LXXXII dup.	205	334	off Martinique	1
LXXXII dup.	130	451	off Santa Cruz	1
LXXXII dup.	186	333	off Dominica	3
LXXXII dup.	222	422	off St. Lucia	1
LXXXIII	154	164	off Grenada	1
LXXXIV	182	1131	off Dominica	1
LXXXV	151	365	off Nevis	1
LXXXVI	180	982	off Dominica	1
LXXXVI dup.	180	982	off Dominica	1
LXXXVII	196	1030	off Martinique	1
LXXXVIII	214	476	off Martinique	1
LXXXVIII dup.	200	472	off Martinique	1
LXXXVIII dup.	163	769	off Guadeloupe	1
LXXXIX	205	334	off Martinique	1
XC	258	159	off Grenada	1
XC dup.	283	237	off Barbados	1
XC dup.	275	218	off Barbados	3
XCI	180	982	off Dominica	1

XCII	265	576	off Grenada	1
XCII dup.	161	583	off Guadeloupe	1
XCII dup.	135	450	off Santa Cruz	1
XCII dup.	185	333	off Dominica	2
XCII dup.	200	472	off Martinique	1
XCII dup.	227	573	off St. Vincent	1
XCII dup.	130	451	off Santa Cruz	1
XCII dup.	195	501	off Martinique	1
XCII dup.	188	399	off Barbados	1
XCII dup.	239	338	off Grenadines	1
XCIII	260	291	off Grenada	1
XCIV	100	250-400	off Moro Castle, Cuba	1
XCV	185	333	off Dominica	1
XCVI	163	769	off Guadeloupe	1
XCVI dup.	162	734	off Guadeloupe	2
XCVI dup.	227	573	off St. Vincent	4
XCVII	274	209	off Barbados	2
XCVII dup.	274	209	off Barbados	31
XCVIII	227	573	off St. Vincent	1
XCVIII dup.	227	573	off St. Vincent	3
XCVIII dup.	143	298	off Montserrat	1
XCVIII dup.	257	553	off Grenada	1
XCIX	262	90	off Grenada	3
XCIX dup.	262	90	off Grenada	30
C	132	115	off Santa Cruz	1
CI	231	95	off St. Vincent	1
CII	142	27	Flannegans Passage	1
CIII	142	27	Flannegans Passage	1
CIV	295	180	off Barbados	1
CI dup.	291	200	off Barbados	2
CI dup.	297	123	off Barbados	1
CV	150	375	off Nevis	1
CVI	190	524	off Dominica	1
CVII	291	200	off Barbados	1
CVIII	148	208	off St. Kitts	1
CIX	188	372	off Dominica	1
CX	258	159	off Grenada	1
CXI	300	82	off Barbados	1
CXII	243	82	off Barbados	1
CXIII	151	365	off Nevis	1
CXIV	290	73	off Barbados	1
CXV	243	82	off Barbados	1
CXVI	276	94	off Barbados	1
CXVII	276	94	off Barbados	1
CXVIII	290	78	off Barbados	1
CXIX	243	82	off Barbados	1
CXX	253	92	off Grenada	1



<i>Present Number</i>	<i>Dredge Number</i>	<i>Depth fms.</i>	<i>Localities</i>	<i>Number of Specimens</i>
CXXI	128	180	off Santa Cruz	1
CXXII	142	27	Flannegans Passage	1
CXXIII	142	27	Flannegans Passage	1
CXXIV	142	27	Flannegans Passage	2
CXXV	271	458	off Bequia	1
CXXVI	278	69	off Barbados	1
CXXVII	243	82	off Barbados	1
CXXVIII	300	82	off Barbados	1
CXXIX	132	115	off Santa Cruz	1
CXXX	220	116	off St. Lucia	1
CXXXI	276	94	off Barbados	1
CXXXII	104	500	Old Bahama Channel	1
CXXXIII	241	163	off Cariacou	1
CXXXIV	293	82	off Barbados	1
CXXXV	104	500	Old Bahama Channel	1
CXXXV dup.	104	500	Old Bahama Channel	1
CXXXVI	104	500	Old Bahama Channel	1
CXXXVII	104	500	Old Bahama Channel	1
CXXXVI dup.	104	500	Old Bahama Channel	1
CXXXVIII	104	500	Old Bahama Channel	1
CXXXIX	109	1554	off Caya de Moa	1
CXL	111	1200	lat. 19°07'N, lon. 74°52'W	1
CXLI	150	375	off Nevis	1
CXLII	288	399	off Barbados	1
CXLIII	150	375	off Nevis	1
CXLIV	256	370	off Grenada	1
CXLV	284	347	off Barbados	1
CXLVI	283	237	off Barbados	1
CXLVII	205	surface	off Martinique	2
CXLVIII	201	565	off Martinique	2
CXLVIII dup.	201	565	off Martinique	3
CXLIX	212	317	off Martinique	2
CL	204	476	off Martinique	2
CLI	217	398	off St. Lucia	1
CLII	217	398	off St. Lucia	1
CLIII	222	422	off St. Lucia	1
CLIV	124	580	off Santa Cruz	1
CLV	207	826	off Martinique	1
CLVI	182	1131	off Dominique	1
CLVII	190	524	off Dominique	1
CLVIII	190	524	off Dominique	2
CLIX	185	333	off Dominique	1
CLIX dup.	185	333	off Dominique	1
CLIX dup.	188	372	off Dominique	4



CLX	188	372	off Dominique	1
CLXI	236	1591	off Bequia	1
CLXII	180	982	off Dominica	1
CLXIII	173	734	off Guadeloupe	2
CLXIV		769	off Guadeloupe	1

## Blake Exp. 1877-78

CLXV	29	955	lat. 24°36'n, lon. 84°05'w	1
CLXVI	29	955	lat. 24°36'n, lon. 84°05'w	1
CLXVII	12	36	lat. 24°46'n, lon. 83°16'w	1
CLXVIII	36	84	lat. 23°13'n, lon. 89°10'w	1
CLXIX	12	36	lat. 24°46'n, lon. 83°16'w	1
CLXX	29	955	lat. 24°36'n, lon. 84°05'w	1
CLXXI	11	37	lat. 24°43'n, lon. 83°25'w	5
CLXXII	29	955	lat. 24°36'n, lon. 84°05'w	2
CLXXIII	29	955	lat. 24°36'n, lon. 84°05'w	1
CLXXIV	31	1850	lat. 24°33'n, lon. 84°23'w	1
CLXXV	186	88	off Alligator Keys	1
CLXXVI	37	35	Alacran Shoals, Yucatan	9
CLXXVII	37	35	Alacran Shoals, Yucatan	1
CLXXIX	47	321	lat. 28°42'n lon. 88°40'w	4
CLXXX	6	137	lat. 24°17.5'n lon. 82°09'w	1
CLXXXI	47	321	lat. 28°42'n lon. 88°40'w	1
CLXXXII		135	off Key West	1
CLXXXIII		270	Santaren Channel	1
CLXXXIV		128 to 240	Two miles off Havana	1
CLXXXV	45	101	lat. 25°33'n lon. 84°21'w	1
CLXXXVI	32	95	lat. 24°52'n lon. 88°05'w	1
CLXXXVII		177	off Havana	1
CLXXXVIII		40	off Cary's Fort Reef	1
CLXXXIX	29	955	lat. 44°36'n lon. 84°05'w	5
CXC	46	888	lat. 25°43'n lon. 84°47'30"	1
CXCI	44	539	lat. 25°33'n lon. 84°35'w	1
CXCII	36	84	lat. 23°13'n long. 84°16'w	25
CXCIII	36	84	lat. 23°13'n long. 84°16'w	25
CXCIV		175	off Havana	1
CXCV		40	off West Reef	1
CXCVI		98	"off Panfii Reef"	1
CXCVII		42	"W. of Tortugas"	1
CXCVIII		117	Illegible	1
CXCIX		37	W. of Tortugas	1
CC		306	W. of Tortugas	1
CCI		68	W. of Tortugas	1

<i>Present Number</i>	<i>Dredge Number</i>	<i>Depth fms.</i>	<i>Localities</i>	<i>Number of Specimens</i>
CCII		37	W. of Tortugas	1
CCIII		118	off Alligator Reef	1
CCIV	31	1920	lat. 24°33' lon. 84°23'	1
CCV	43	339	lat. 24°08' lon. 82°51'	1
CCVI	35	804	lat. 23°54'-46" lon. 88°58'	1
CCVII	37	35	4 miles w. of whale rock w. of Alacran Reefs	1
CCVIII	29	955	lat. 24°36' lon. 84°05'	1
CCIX	11	37	lat. 24°43' lon. 83°25'	1
CCX		45	off French Reef	1
CCXI		35	off Cargofort Reef	1
CCXII		320	off Cargofort Reef	1
CCXIII		413	off Cape San Antonio	1
CCXIV		96	loc?	1
CCXV		35	W. of Tortugas	1
CCXVI		119	lat. 26°31' lon. 85°03'	1
CCXVII	13	742	3½ N. W. off Havana	1
CCXVIII	47	321	lat. 28°42' lon. 88°40'	1
CCXIX	30	968	lat. 24°33' lon. 84°05'	6
CCXX	29	955	lat. 24°36' lon. 84°05'	1
CCXXI	29	955	lat. 24°36' lon. 84°05'	1
CCXXII	47	321	lat. 28°42' lon. 88°40'	1
CCXXIII	36	84	lat. 23°13' lon. 89°10'	1
CCXXIV	11	37	lat. 24°43' lon. 83°25'	1
CCXXV	47	321	lat. 28°42' lon. 88°40'	1
CCXXVI	12	36	lat. 24°34' lon. 83°16'	1
CCXXVII	12	36	lat. 24°34' lon. 83°16'	2
CCXXVIII	12	36	lat. 24°34' lon. 83°16'	1
CCXXIX	14	850	lat. 23°18' lon. 82°21'	1
CCXXX	36	84	lat. 23°13' lon. 89°10'	2
CCXXXI	29	955	lat. 24°36' lon. 84°05'	1
CCXXXII	37	35	Alacran Shoals, Yucatan	1
CCXXXIII	29	955	lat. 24°36' lon. 84°05'	1
CCXXXIV	10	37	lat. 24°44' lon. 83°00'	5
CCXXXV	3	243 to 450	off Havana	1
CCXXXVI	36	84	lat. 23°13' lon. 89°10'	1
CCXXXVII	12	36	lat. 24°34' lon. 83°16'	1
CCXXXIII	29	955	lat. 24°36' lon. 84°05'	1
CCXXXIX	10	37	lat. 24°44' lon. 83°00'	5
CCXL	29	955	lat. 24°36' lon. 84°05'	3
CCXLI	36	84	lat. 23°13' lon. 89°10'	1
CCXLII	36	84	lat. 23°13' lon. 89°10'	1
CCXLIII	11	37	lat. 24°43' lon. 83°25'	2
CCXLIV	36	84	lat. 23°13' lon. 89°10'	1



CCXLV	3	450 to 243	off Havana	1
CCXLVI	29	955	lat. 24°36' lon. 84°05'	1
CCXLVII	12	36	lat. 24°34' lon. 83°16'	9
CCXLVIII	36	84	lat. 23°13' lon. 89°10'	1
CCXLIX	11	37	lat. 24°43' lon. 83°25'	1
CCL	11	37	lat. 24°43' lon. 83°25'	1
CCLI	37	35	Alacran Shoals, Yucatan	5
CCLII	37	35	Alacran Shoals, Yucatan	2
CCLIII	11	37	lat. 24°43' lon. 83°25'	1
CCLIV	37	35	Alacran Shoals, Yucatan	1
CCLV	36	84	lat. 23°13' lon. 89°10'	9
CCLVI	47	321	lat. 28°42' lon. 88°40'	1
CCLVII	36	84	lat. 23°13' lon. 89°10'	1
CCLVIII	11	37	lat. 24°43' lon. 83°25'	1
CCLIX	36	84	lat. 23°13' lon. 89°10'	2
CCLX	36	84	lat. 23°13' lon. 89°10'	3
CCLXI	36	84	lat. 23°13' lon. 89°10'	1
CCLXII	14		lat. 23°18' lon. 82°21'	2
CCLXIII	11	37	lat. 24°43' lon. 83°25'	1
CCLXIV	36	84	lat. 23°13' lon. 89°10'	2
CCLXV	29	955	lat. 24°36' lon. 84°05'	1
CCLXVI	29	955	lat. 24°36' lon. 84°05'	1
CCLXVII	29	955	lat. 24°36' lon. 84°05'	1
CCLXVIII	29	955	lat. 24°36' lon. 84°05'	1
CCLXIX			no loc.	1
CCLXX	31	1850	lat. 24°33' lon. 84°23'	1
CCLXXI			no loc.	1
CCLXXII			no loc.	1
CCLXXIII			no loc.	1
CCLXXIV				
CCLXXV				
CCLXXVI				



Dick, M M. 1969. "Louis Agassiz's numbers for steamer Blake stations of 1877-78, 1878-79." *Breviora* 313, 1-11.

**View This Item Online:** <https://www.biodiversitylibrary.org/item/25368>

**Permalink:** <https://www.biodiversitylibrary.org/partpdf/31534>

**Holding Institution**

Harvard University, Museum of Comparative Zoology, Ernst Mayr Library

**Sponsored by**

Harvard University, Museum of Comparative Zoology, Ernst Mayr Library

**Copyright & Reuse**

Copyright Status: In copyright. Digitized with the permission of the rights holder.

License: <http://creativecommons.org/licenses/by-nc-sa/3.0/>

Rights: <https://biodiversitylibrary.org/permissions>

This document was created from content at the **Biodiversity Heritage Library**, the world's largest open access digital library for biodiversity literature and archives. Visit BHL at <https://www.biodiversitylibrary.org>.