

The Station Biologique de Roscoff and the Scottish Marine Station for Scientific Research: “une histoire croisée” across France and Scotland



Marion
Maisonobe,
CNRS,
Géographie-
cites, Paris

Niki
Vermeulen,
University of
Edinburgh



Art Forms in Nature, Ernst Haeckel (1904)

Overview

- Roscoff Marine Station:
a model to follow?
- The Scottish Marine Station:
Edinburgh origins and travels
- Choreography of international relations
- Focus on seaweed:
Culture collections and Ectocarpus

Roscoff biology station

Founded in 1872 by Henri de Lacaze-Duthiers

150 year anniversary in 2022

Supposed to be an itinerant station at first

~ HMS Challenger on the coast

3 core functions from the start:

- Experimental research
- Hosting researchers and students (teaching from 1881)
- Relation to fisheries (applied)





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Roscoff – A Model To Follow?

Late XIXth century – creation of 15 French marine stations

Lacaze-Duthiers occupies a central role in this movement

- Connection with other stations' directors (Dayrat, 2016)
- Editor of *Archives de zoologie expérimentale et générale* (Debaz, 2005)
- A hosting station

1872-1876 – Lacaze-Duthiers' Register (~50% of students)

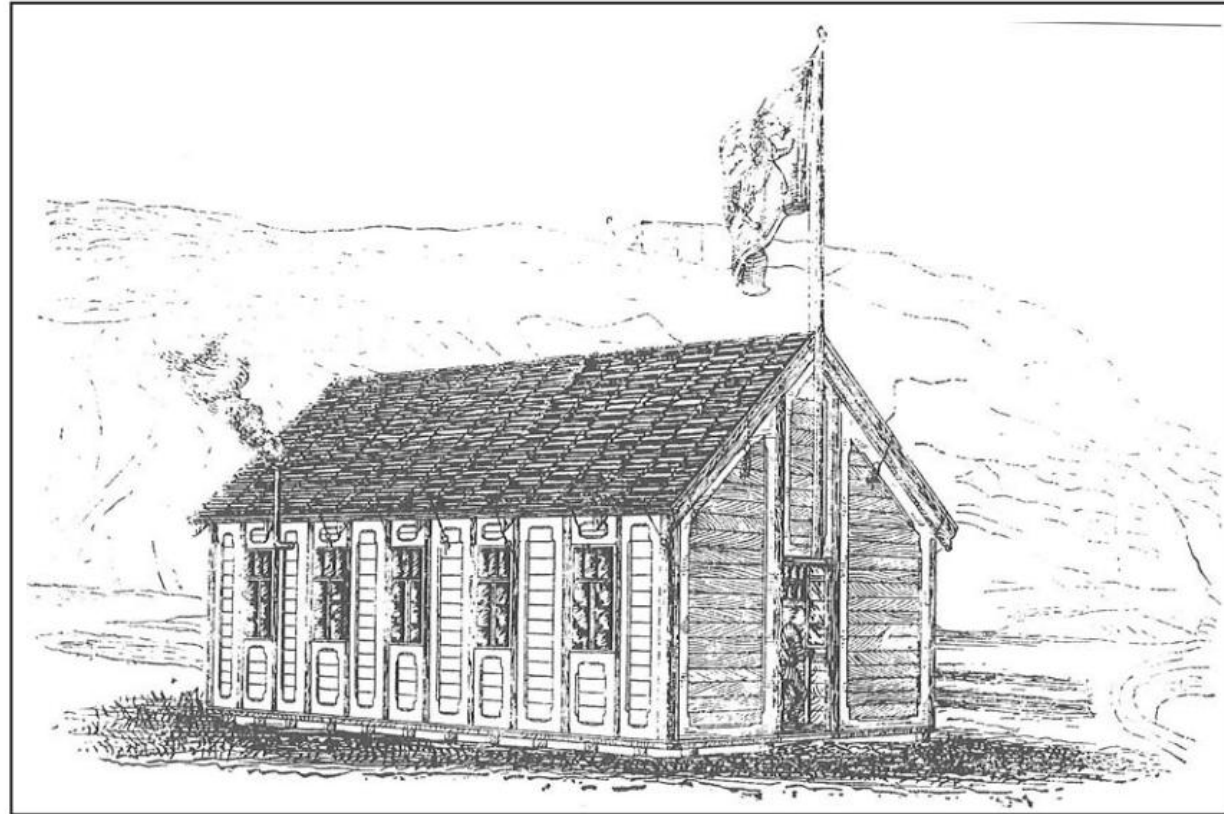
- 1873: 4 visitors
- 1874: 9 (3 from abroad - London, Kiev, Geneva)
- 1878, 1880: visits from Patrick Geddes (Scotland)
- 1881: 31 visitors (Dayrat, op. cit.)
- 1903: 47 visitors (Daubresse, op. cit.)
- ...
- Nowadays: Visitors + Conferences (~40 conferences/year)

Patrick Geddes (1854-1932)

1878, 1880: visits from Patrick Geddes in Roscoff

1878-1889: Correspondence with Lacaze Duthiers

1879: the Scottish zoological Station near Stonehaven



ate 2. The Scottish Zoological Station at Cowie, near Stonehaven, in 1879 as illustrated by P (1879). Assisting Ewart in the running of the station was 24 years old biologist Patrick Ge perhaps better remembered to-day as a sociologist and pioneer town planner.

J.A. Adams, 1996 (Buckland Occasional Papers: No. 2)

SCOTTISH MARINE STATION (1884)

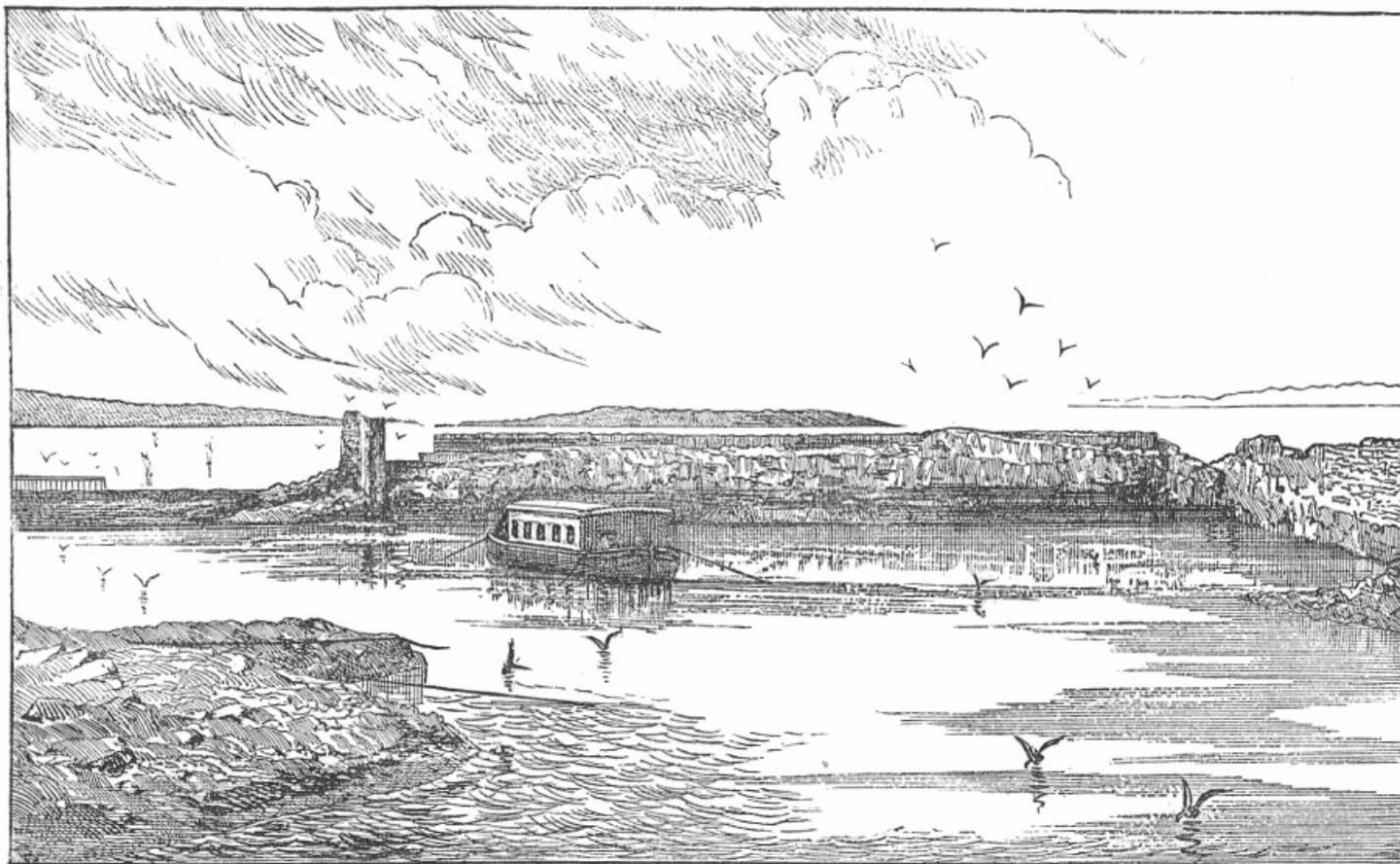
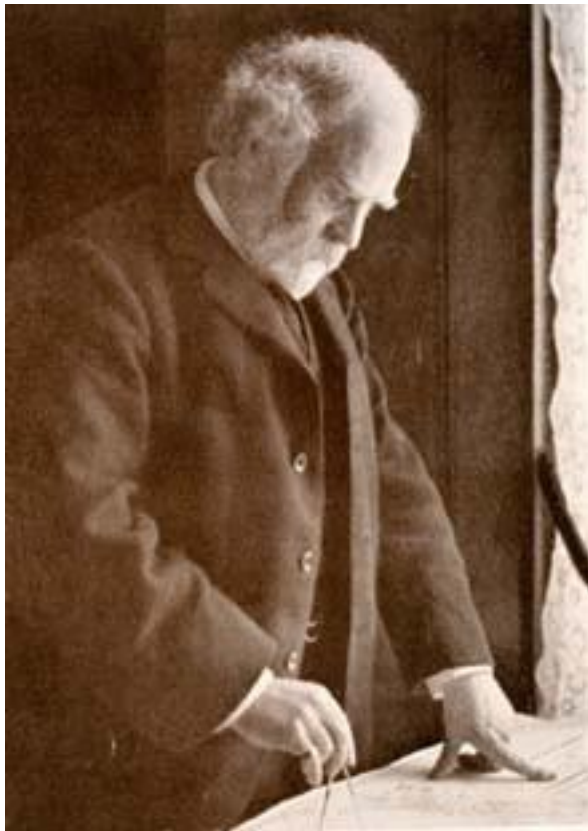
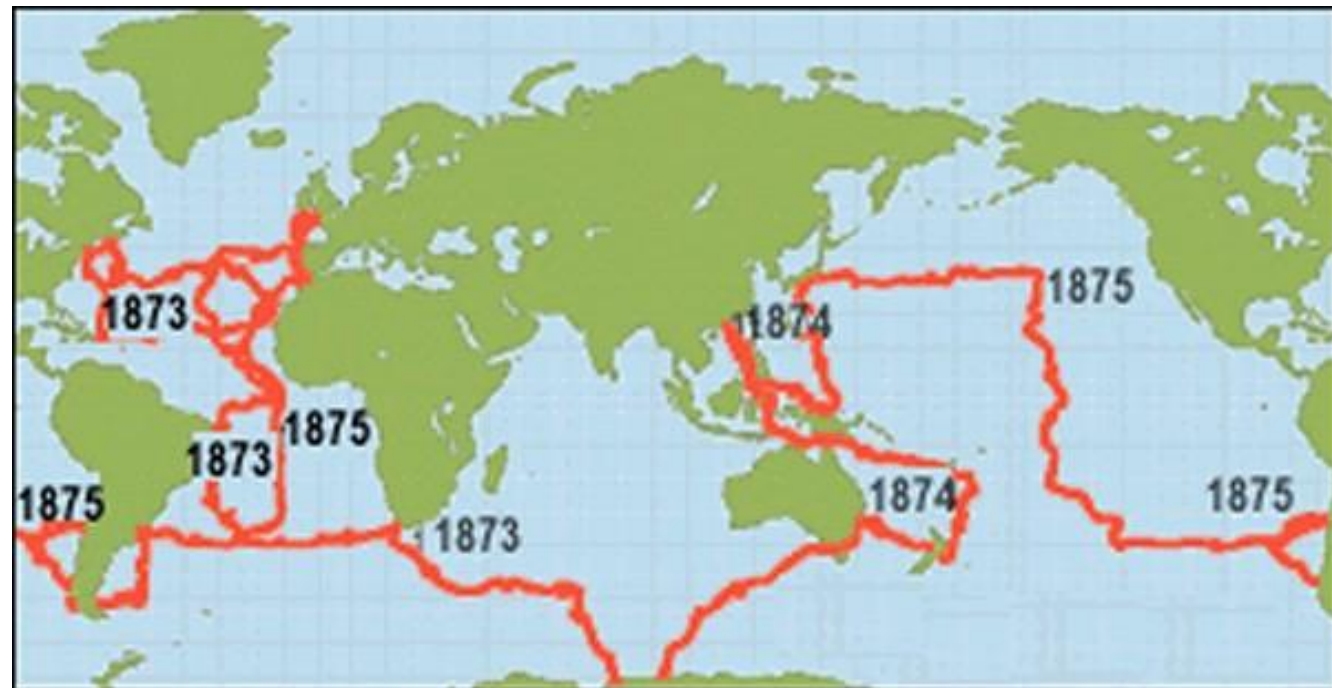
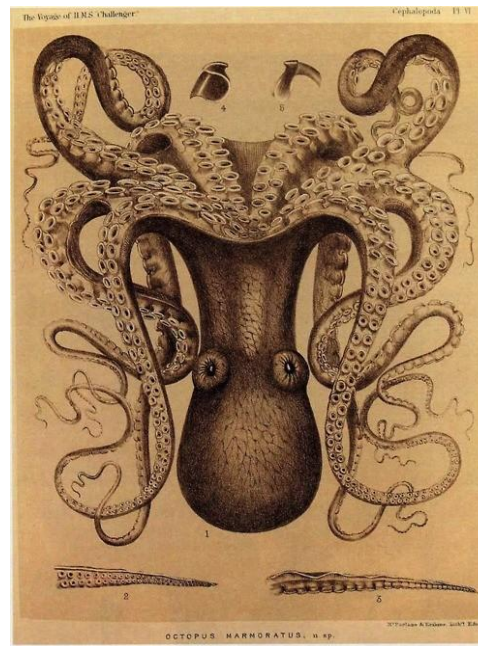


FIG. 2.—View of the Quarry with the “Ark” afloat, looking west. From a photograph by Mr. H. J. Gifford.

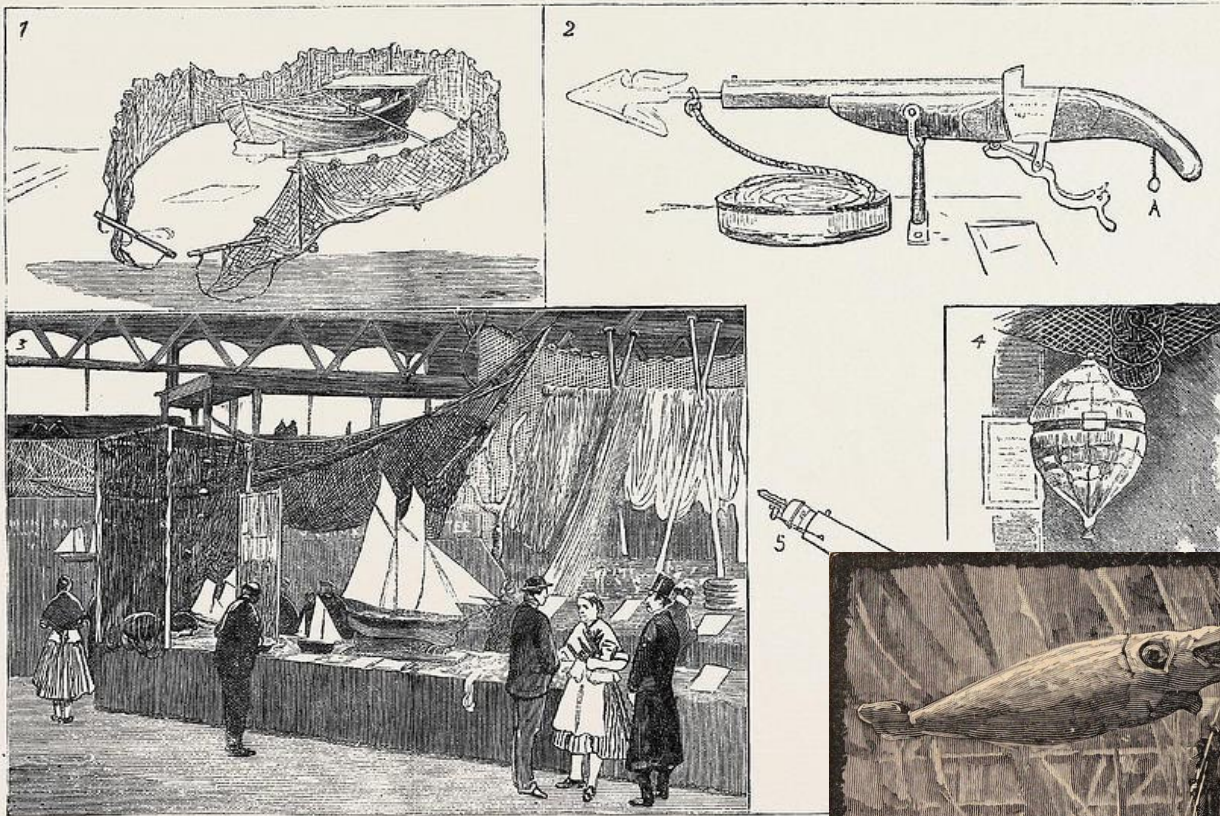


**Sir John Murray
(1841 –1914)**

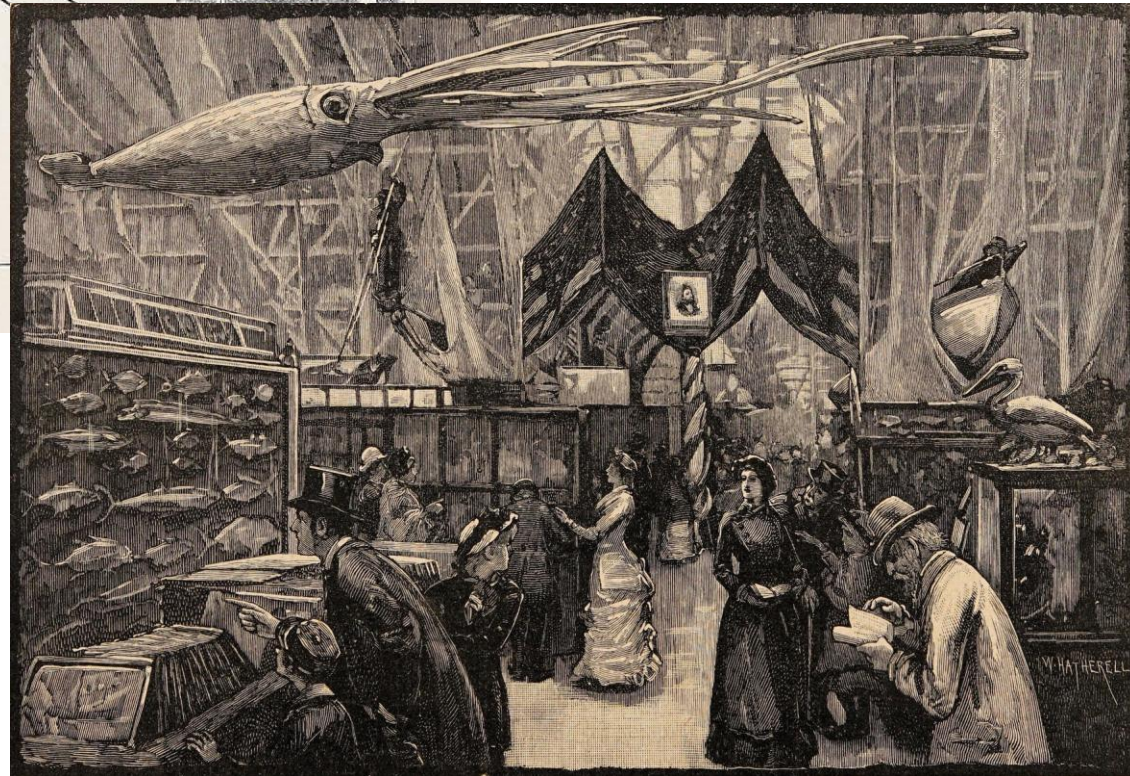


Fisheries exhibitions

London exhibit 1883



Edinburgh Fisheries exhibit 1882



Location of Marine Station at Granton



*Granton Harbour wall in the distance
and the outlying rock beds*



Picture via Granton:hub archive

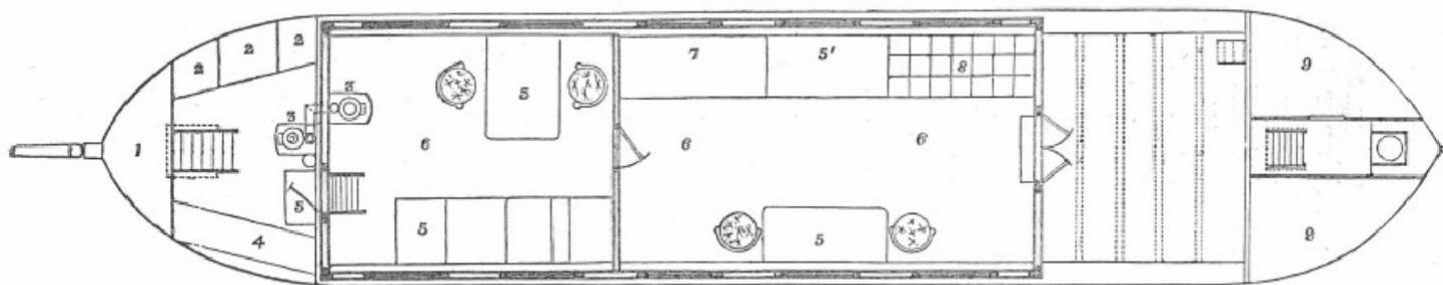


FIG. 3.—Plan of the “Ark,” showing the internal arrangements. 1, Coal bunker; 2, lockers; 3, stoves; 4, keeper's berth; 5, wooden tables; 5', 7, 8, tables for aquaria; 6, lockers under flooring; 9, fore-cabin.

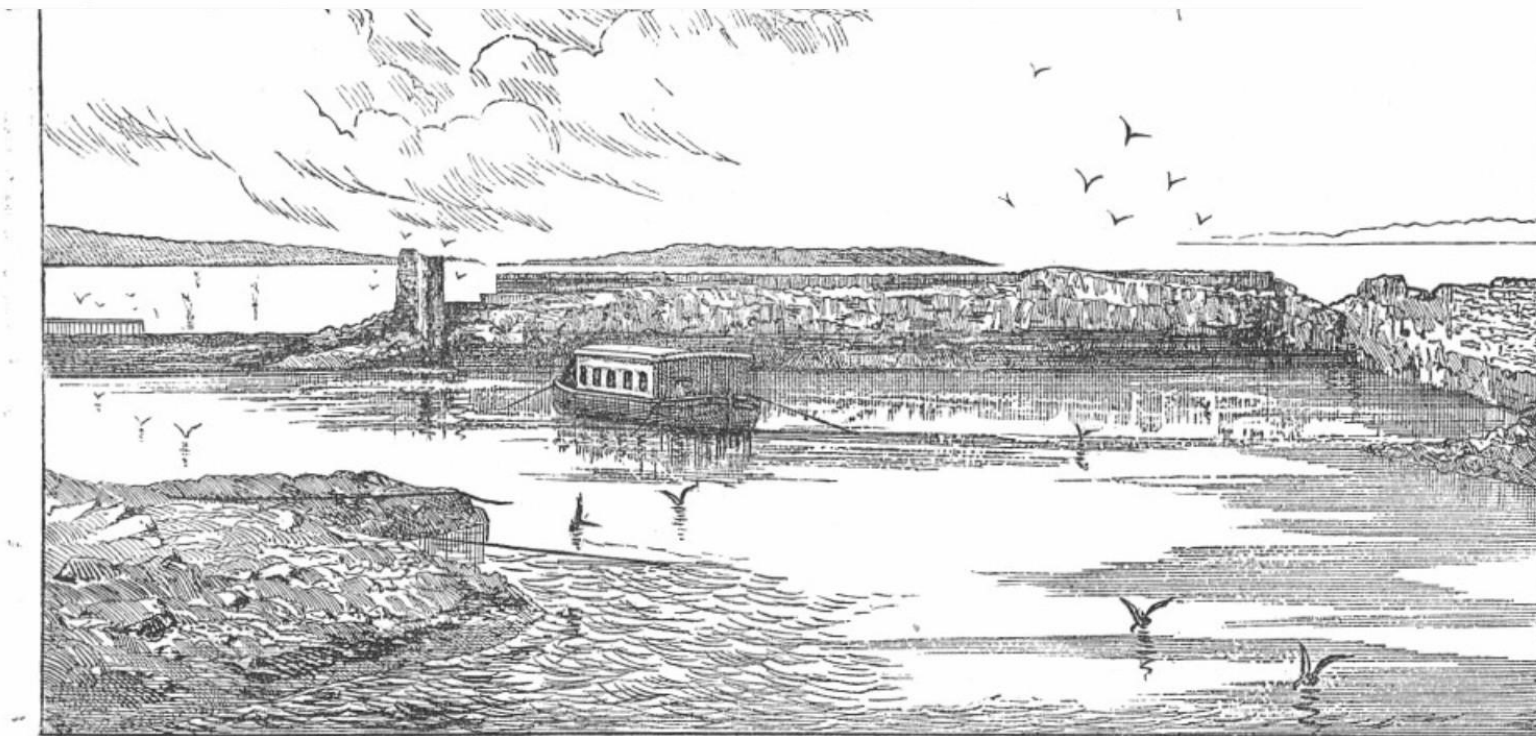


FIG. 2.—View of the Quarry with the “Ark” afloat, looking west. From a photograph by Mr. H. J. Gifford.

August.

Diary re Crabs

19. A small Crab in a jar without seaweed cast this morning the Cast being perfect. This in Hot Water

~~Curiously enough~~ the Crab before casting wanted 5 of the twelve legs (as shown from the discarded envelope) & curiously enough the emerged creature had replaced the five limbs

These five limbs were very thin & weak but the beast had the power to move them

20. Cast crab in good health



The Centre for Research Collections (CRC),
University of Edinburgh

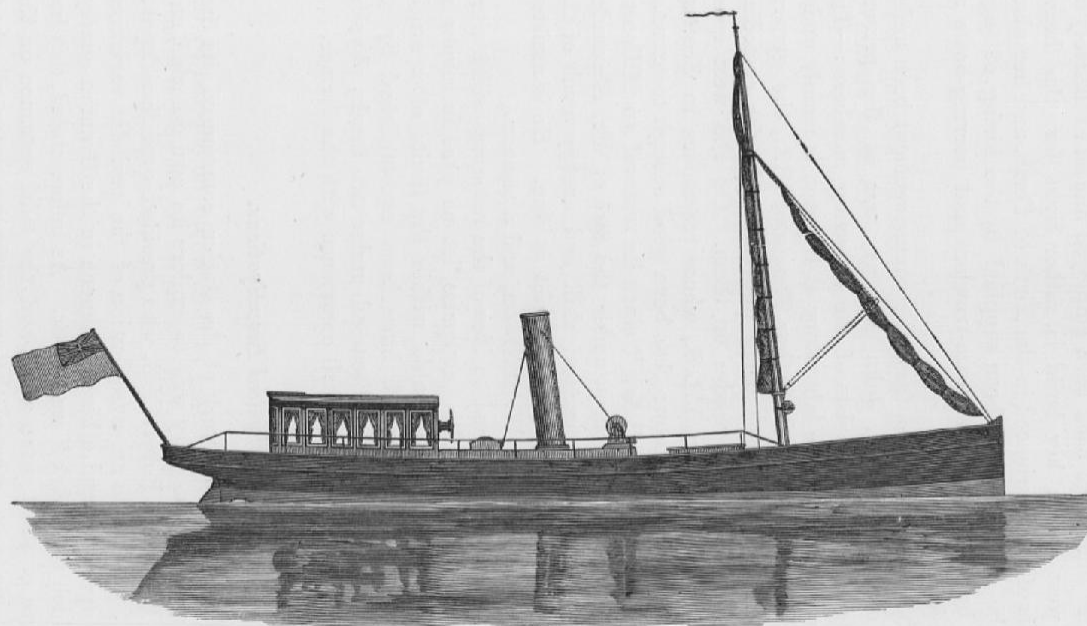


FIG. 4.—The “Medusa.” Scale, one inch to the foot.

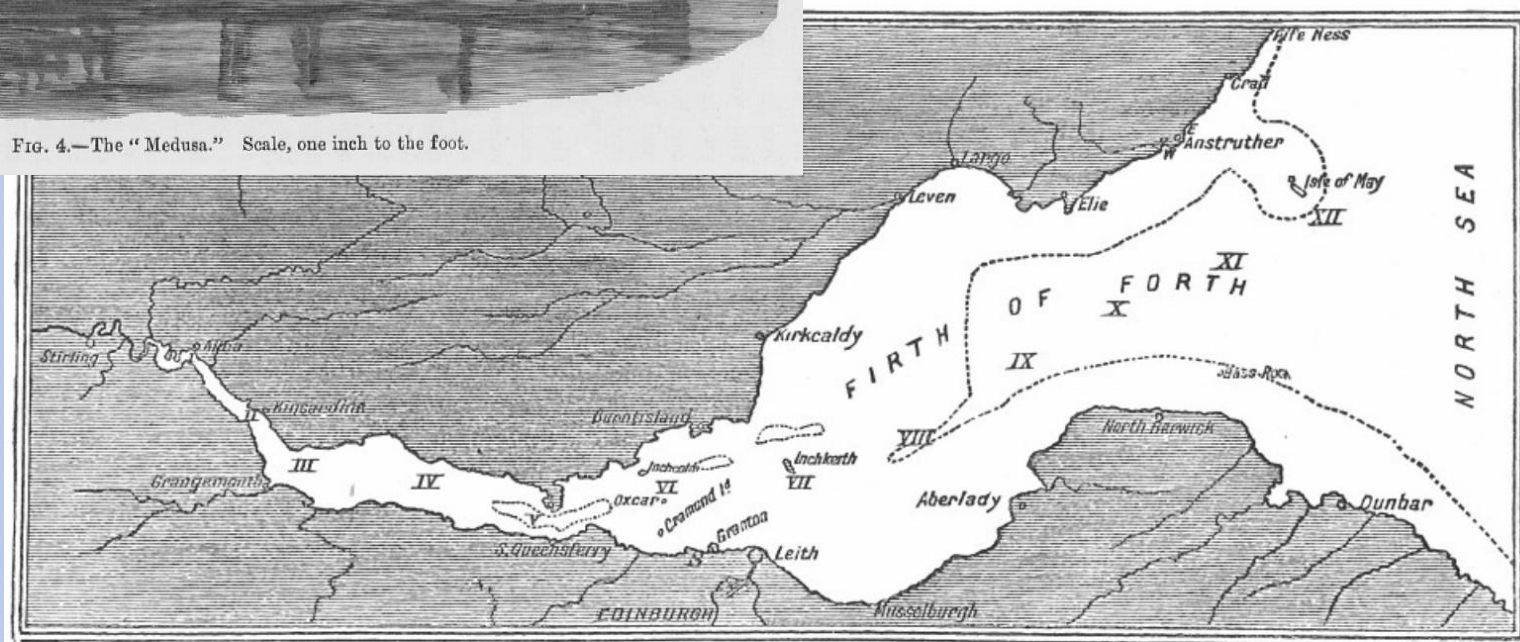


FIG. 8.—Chart of the Firth of Forth, in which the Observing Stations are indicated by Roman numerals.

The "Ark" - the
forerunner of the
Millport Marine
Station - beached
nearby



Millport Marine Station

"THE ARK"

IS OPEN TO VISITORS
(WEDNESDAYS AND SUNDAYS EXCEPTED)

From 10 a.m. till 12.30 p.m., and
1.30 p.m. till Dusk.

— A Number of New Objects —

Are on View this Season, including some beautiful Specimens from the Mediterranean.

— Microscopes are Provided —

by which Visitors are shown interesting Examples of the
Minuter Forms of MARINE LIFE.

In order to make the Educational Value of the Institution as
largely available as possible, only a Nominal Charge is
made for Admission, viz.,

ONE PENNY.

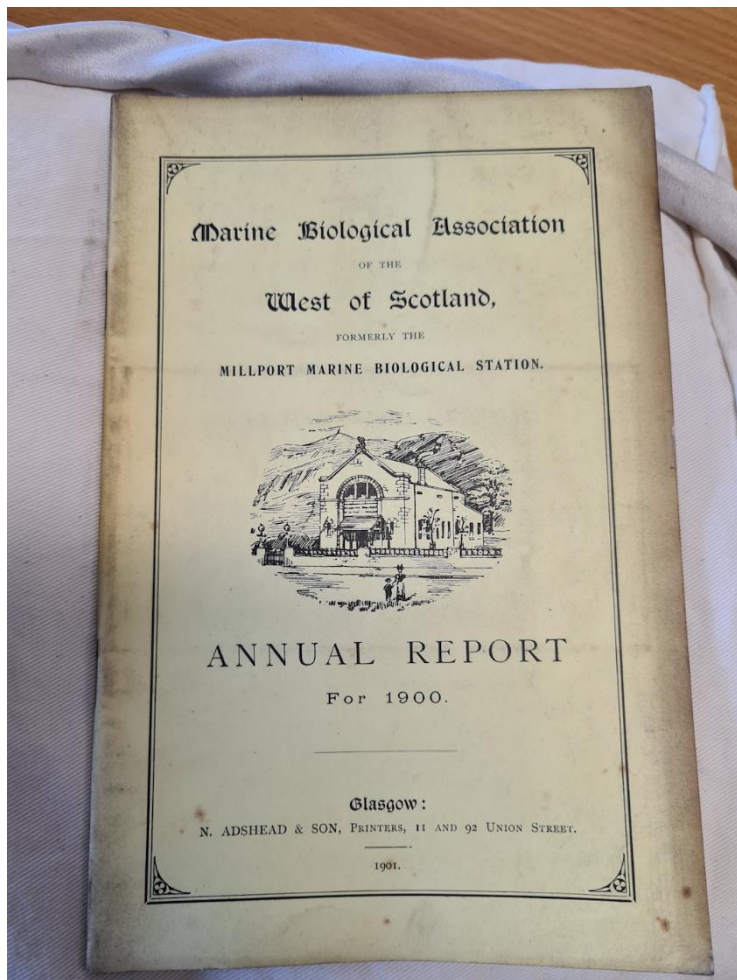
J. & R. Simpson, Printers, Largs.





7th August 1896 Dr David Robertson cutting the first turf of the construction of the Marine Station.

Photographs held at the Oban marine station



The Marine Station with laboratory, museum, aquarium and library. Outside - the postman.

Recommandation by Anton Dohrn (Annual Report, 1898):

already -

"I am fully persuaded that Millport is an excellent place for a zoological station, which should amply repay all the outlay necessary for its equipment and maintenance. It should be of the greatest benefit to every naturalist, British or foreign, who resorts to Millport as I did myself now almost thirty years ago. I derived much benefit from studying the fauna and flora there."

F. J. C. of Sevenoaks, Kent writes—"I think

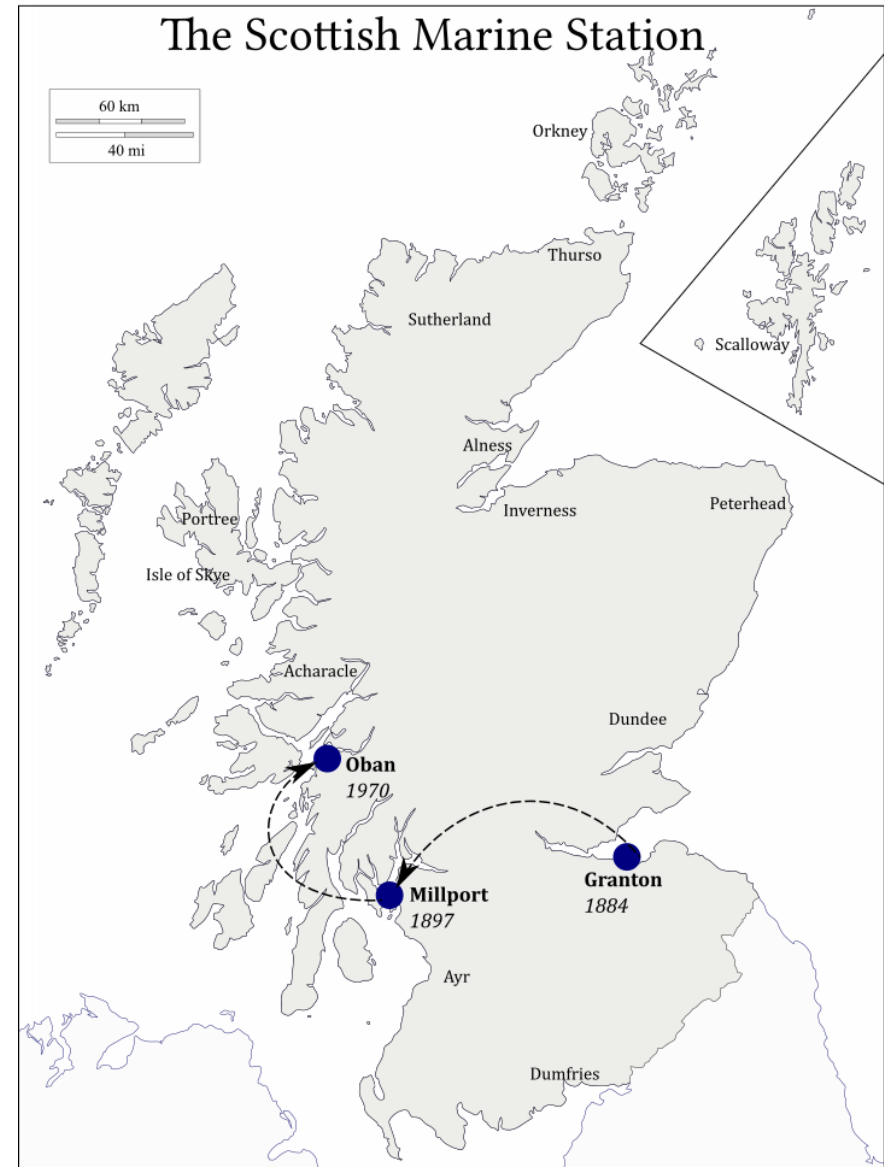
**From East coast
to West coast**



Oban



Millport



International connections



CNRS • SORBONNE UNIVERSITÉ
**Station Biologique
de Roscoff**



“Conférence Internationale sur la Biologie Comparée des Espèces Marines dans les Différents Districts de leur Aire de Répartition” (27 june - 4 july 1956 in Roscoff).

- Supported by the l'UNESCO



Number of participants (max = 13; min = 1). Created with Netscity by M. Maisonobe (<https://www.irit.fr/netscity>).

Margaret & Harold Barnes recognized as world authorities on barnacle biology.



Fig. 14. 1935? Roscoff, Hôtel de la Marine, Lise et Georges Teissier. Crédit : FBT.

Fig. 38. Hans Erni, 1953 : *Le Professeur Georges Teissier*. Détrempe sur toile, 160 x 194. Fondation Hans Erni, Lucerne (Suisse).

La photographie précédente a été intégrée par l'artiste suisse dans le tableau destinée à illustrer à la fois l'œuvre du bâtisseur et celle du scientifique.





Sheina Marshall
1896-1977





Professeur des universités, directeur de la station biologique, Bernard Kloareg a été distingué par le scientifique et chercheur Claude Lévi. | OUEST-FRANCE

Bernard Kloareg

Director of the Roscoff station bet. 2004 & 2018

ArmorScience

Conférence "Société et Sciences"

Vendredi 7 octobre 2022
18H00

Salle Sainte-Anne
2 rue de Kerampont
Lannion

Les grandes algues marines
Un nouvel eldorado pour la Bretagne ?

Bernard KLOAREG
Ingénieur agronome
Ancien directeur
de la station biologique de Roscoff

INFORMATIONS
www.armorscience.com

Conférence inaugurale de
la fête de la Science 2022

Avec le soutien de LTC

ENTRÉE GRATUITE

European Networks

- [EMBRC](#) research infrastructure of European marine stations which provides:
 - access to a wide range of European coastal marine bioresources and ecosystem
 - an integrated supply of marine organisms for interdisciplinary research, including new research model organisms
 - coordinated services including state-of-the-art biobanks, culture collections and dedicated platforms for genomics, structural and functional biology, microscopy and bioinformatics
 - interdisciplinary training in marine biological sciences
 - outreach to stakeholders, users and the public at large



EMBRC
EUROPEAN
MARINE
BIOLOGICAL
RESOURCE
CENTRE

9

MEMBER COUNTRIES ACROSS EUROPE

77

MARINE SITES

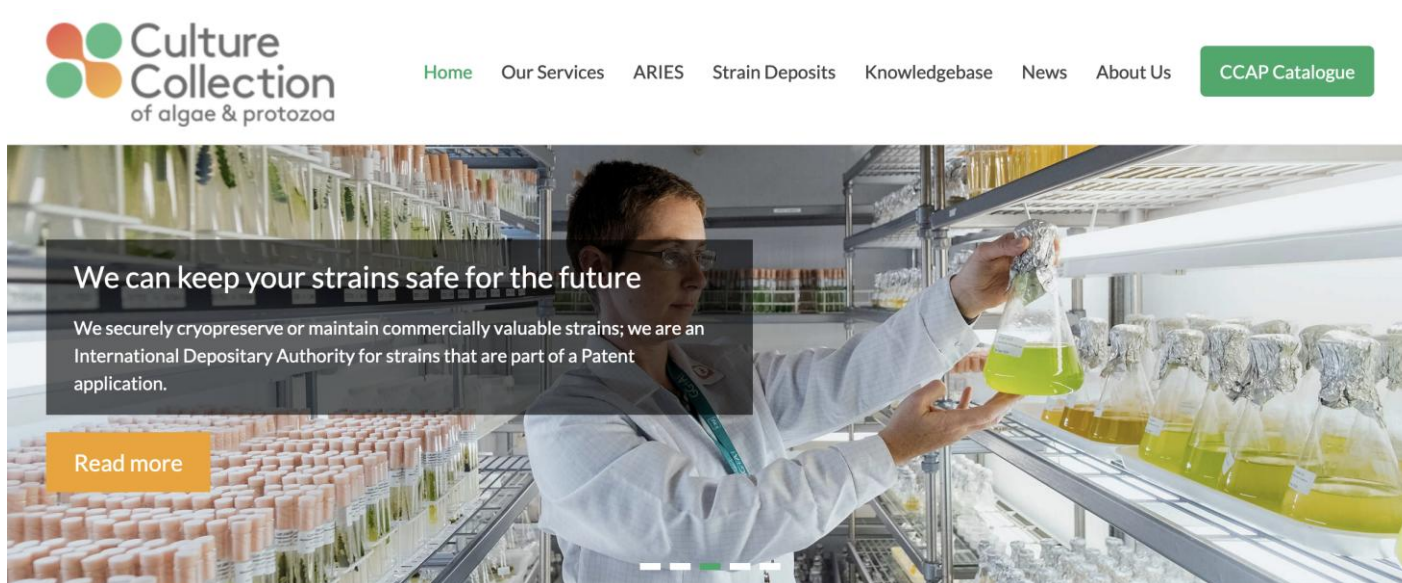
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RESEARCH SERVICES



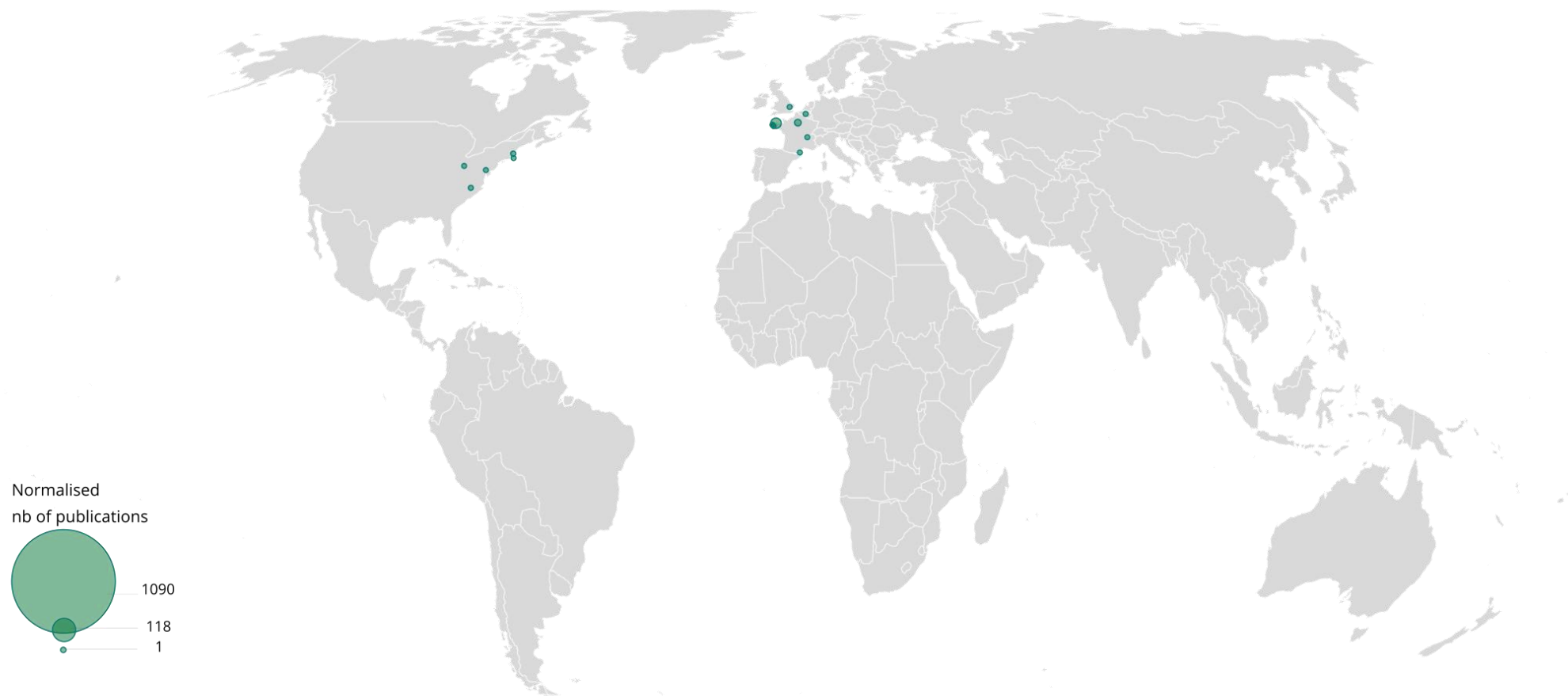


- From 1998, the **Roscoff Culture Collection (RCC)** >5500 strains (microalgae)
- **Center for Plankton Collections (CCP)** → over 20,000 sampling
- GMOs → cyanobacteria (*Synechococcus* spp) and macroalgae (*Ectocarpus* spp)



Oban culture collection (CCAP – From Vienna to Oban)

Roscoff Scientific Production by city up until 1975

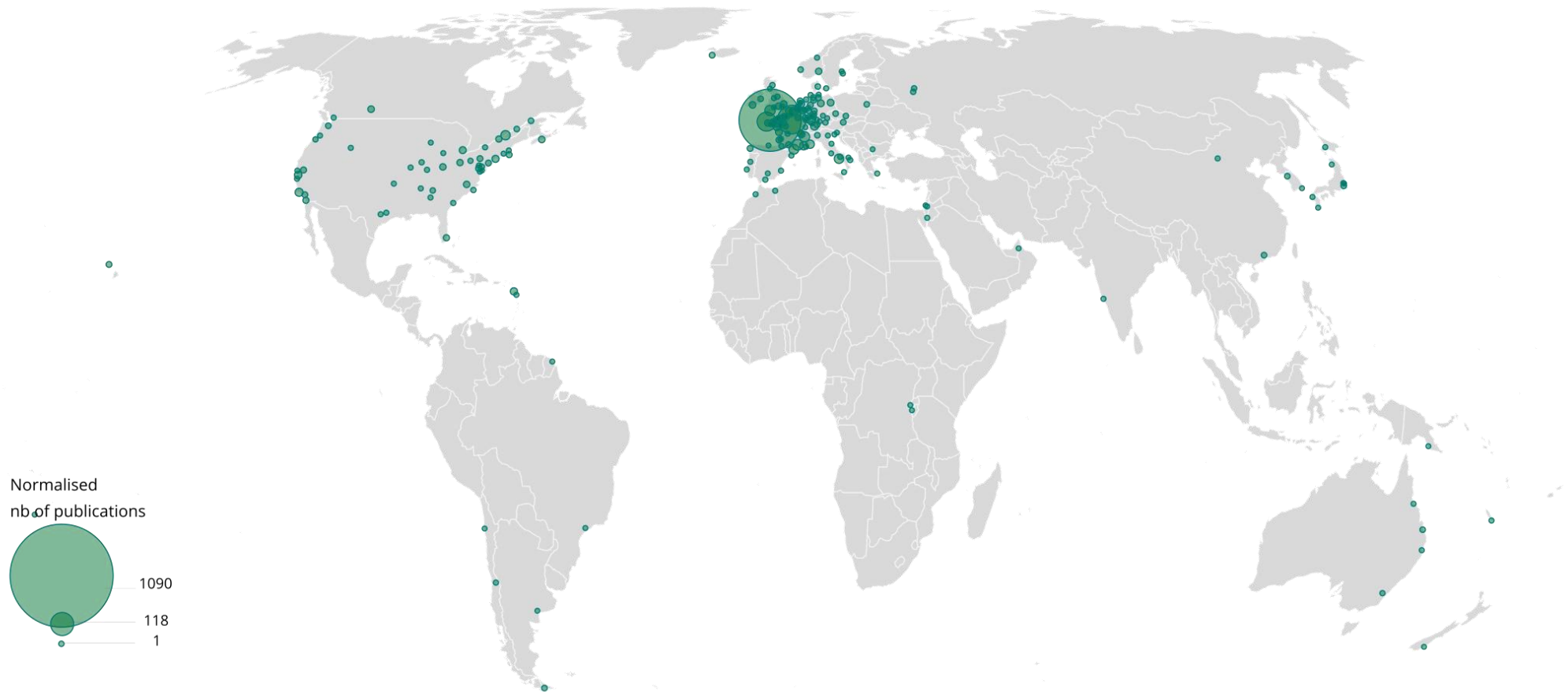


Map of Roscoff publications indexed in the Web of Science (All indexes) on October, 8 2020
Address (AD) : "Roscoff".

Created with Netscity (<https://www.irit.fr/netscity/prod/>) by MM (UMR Géographie-cités - CNRS). JS map by amCharts.



Roscoff Scientific Production by city between 1975 and 2000

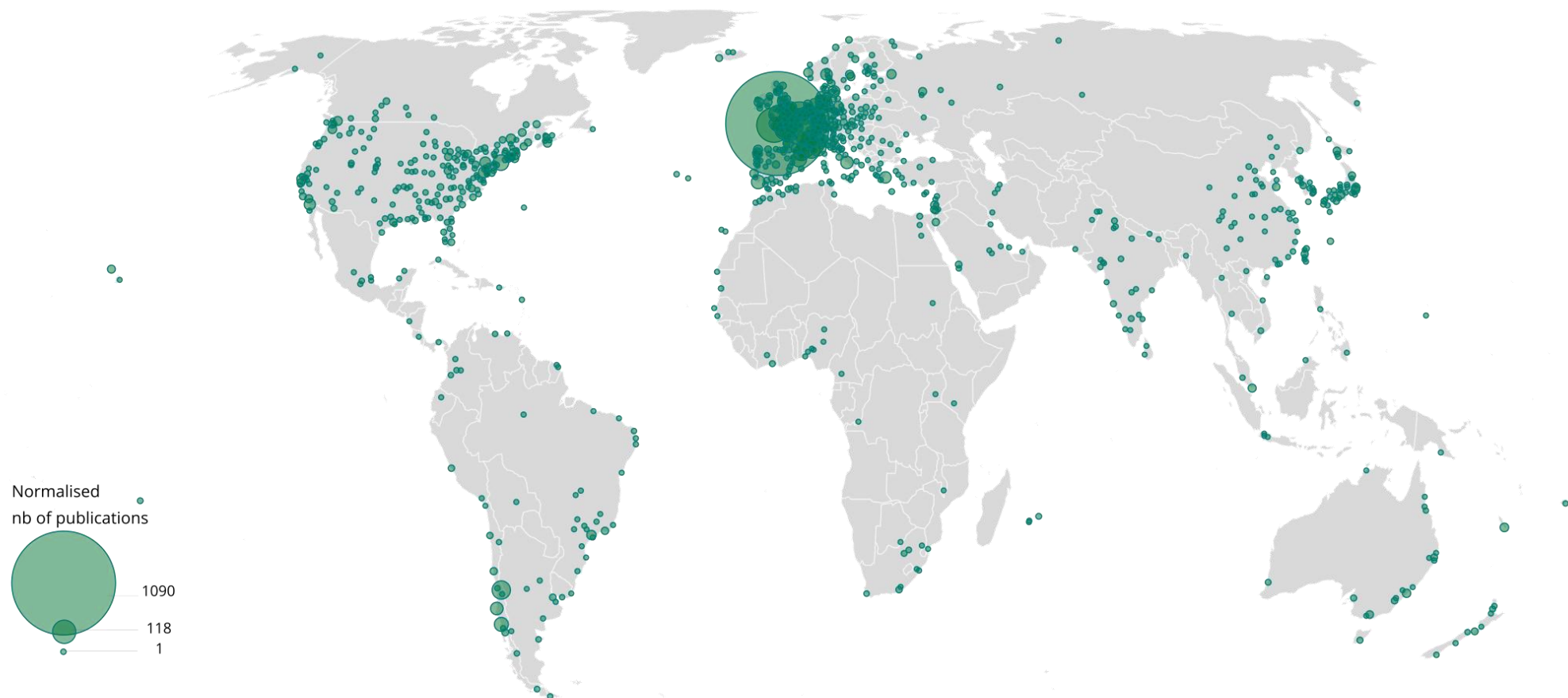


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Roscoff Scientific Production by city since 2000



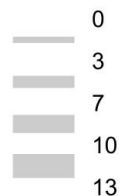
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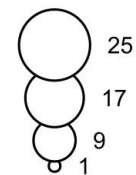


Interurban scientific collaboration signed from Roscoff up until 1975

Normalised nb of collaboration



Nb of collab. per city



Graph of Roscoff scientific collaborations indexed in the WoS (All indexes) on October, 8 2020.

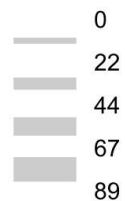
AD Query : 'Roscoff'.

MM, 2020

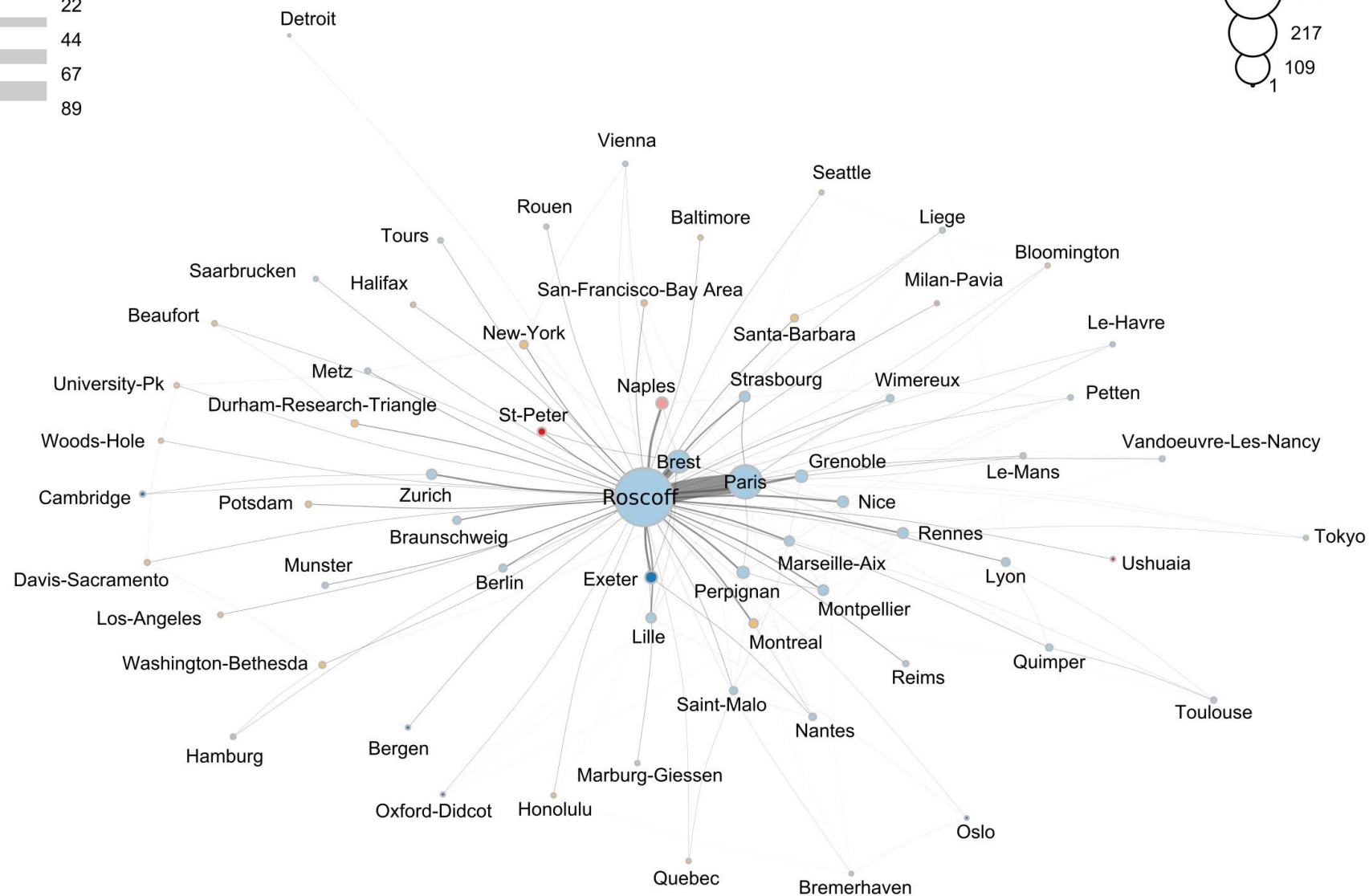
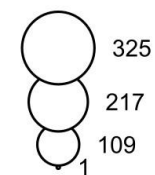
▼ N. America
 ▼ W. Europe
 ▼ N. Europe

Interurban scientific collaboration signed from Roscoff between 1975 and 2000.

Normalised nb of collaboration



Nb of collab. per city



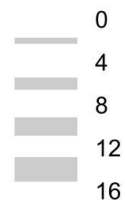
Graph of Roscoff scientific collaborations indexed in the WoS (All indexes) on October, 8 2020.

AD Query : 'Roscoff'. Vertices with weighted degree ≥ 2 (Roscoff included)

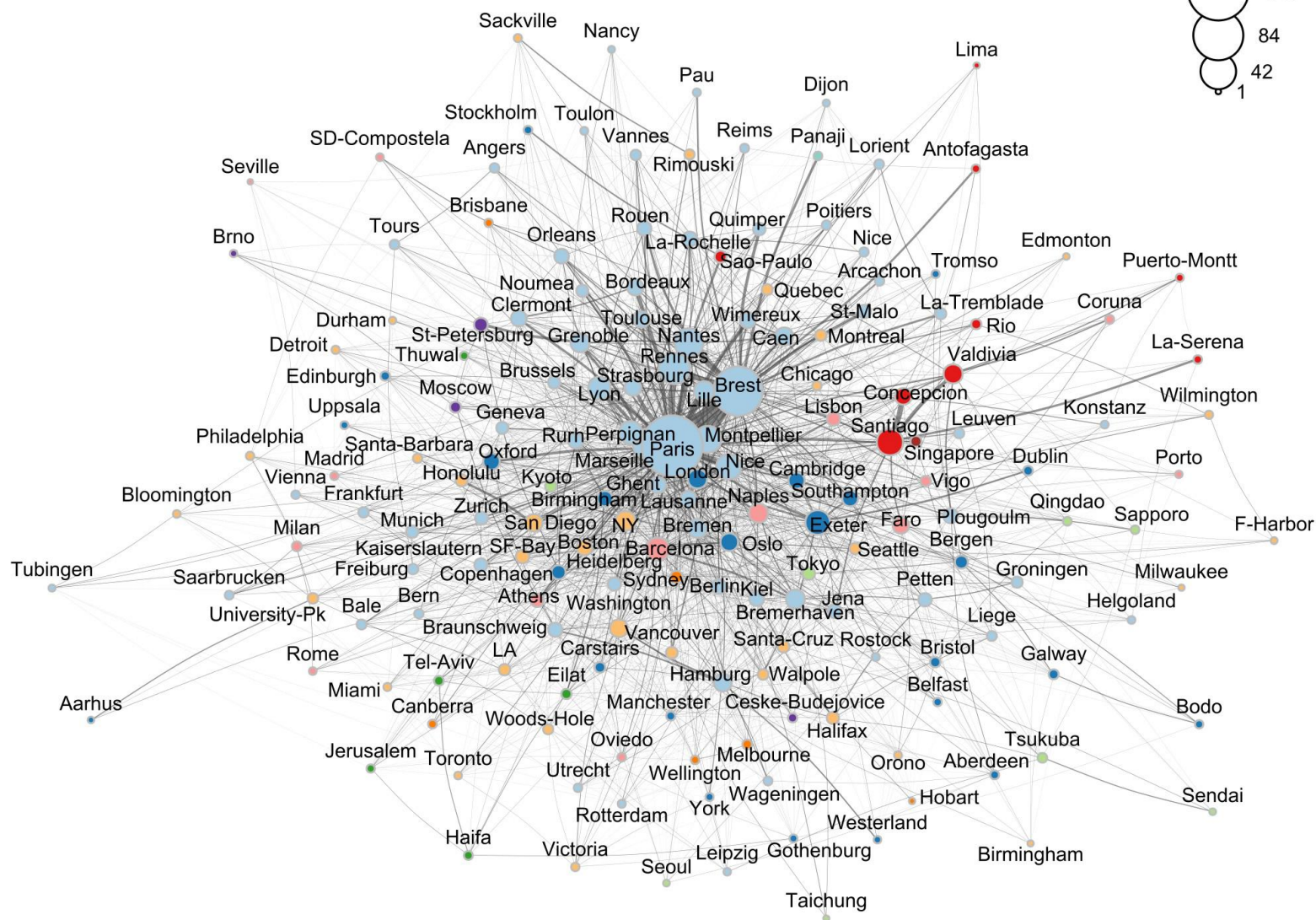
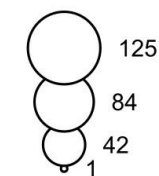
MM, 2020

Interurban scientific collaboration signed from Roscoff since 2000.

Normalised nb of collaboration



Nb of collab. per city



Graph of Roscoff scientific collaborations indexed in the WoS (All indexes) on October, 8 2020.

AD Query : 'Roscoff'. Vertices with weighted degree > 2 (without Roscoff).

MM, 2020

Some concluding thoughts

- From individual histories of stations towards study of connections between stations: *histoire croisée*
- Travellers between stations as go-betweens: Geddes, Dohrn, Kofoed...
- Different life courses of stations show local and national specificities, including specific institutional configurations and modes of financial support
- Embedding in international networks shows connections and trends across borders but also differences and discontinuities, e.g. effects of World Wars and more currently Brexit

Thank you!

marion.maisonobe@cnrs.fr

niki.vermeulen@ed.ac.uk



CNRS • SORBONNE UNIVERSITÉ
**Station Biologique
de Roscoff**



Géographie-cités
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*The Royal Society
of Edinburgh*

KNOWLEDGE MADE USEFUL

