

Wester Ross Marine Protected Area

DISCOVERY DAY

Celebrating our amazing seas!



Talks from leading marine scientists researching our incredible sea habitats



Hear from local community coastal groups working to protect the MPA



Amazing new video footage of wild fish and the marine ecosystem



Citizen science and how you can get involved



Activities and workshops



Something for everyone, young and old, with an interest in the sea!

MACPHAIL CENTRE

14TH OCTOBER

10AM - 4:30PM

FREE ADMISSION - OPEN TO ALL



Peter Cunningham
info@wrft.org

Emma Watson
admin@wrft.org



Full programme available on
www.facebook.com/WRFT22
www.wrft.org.uk

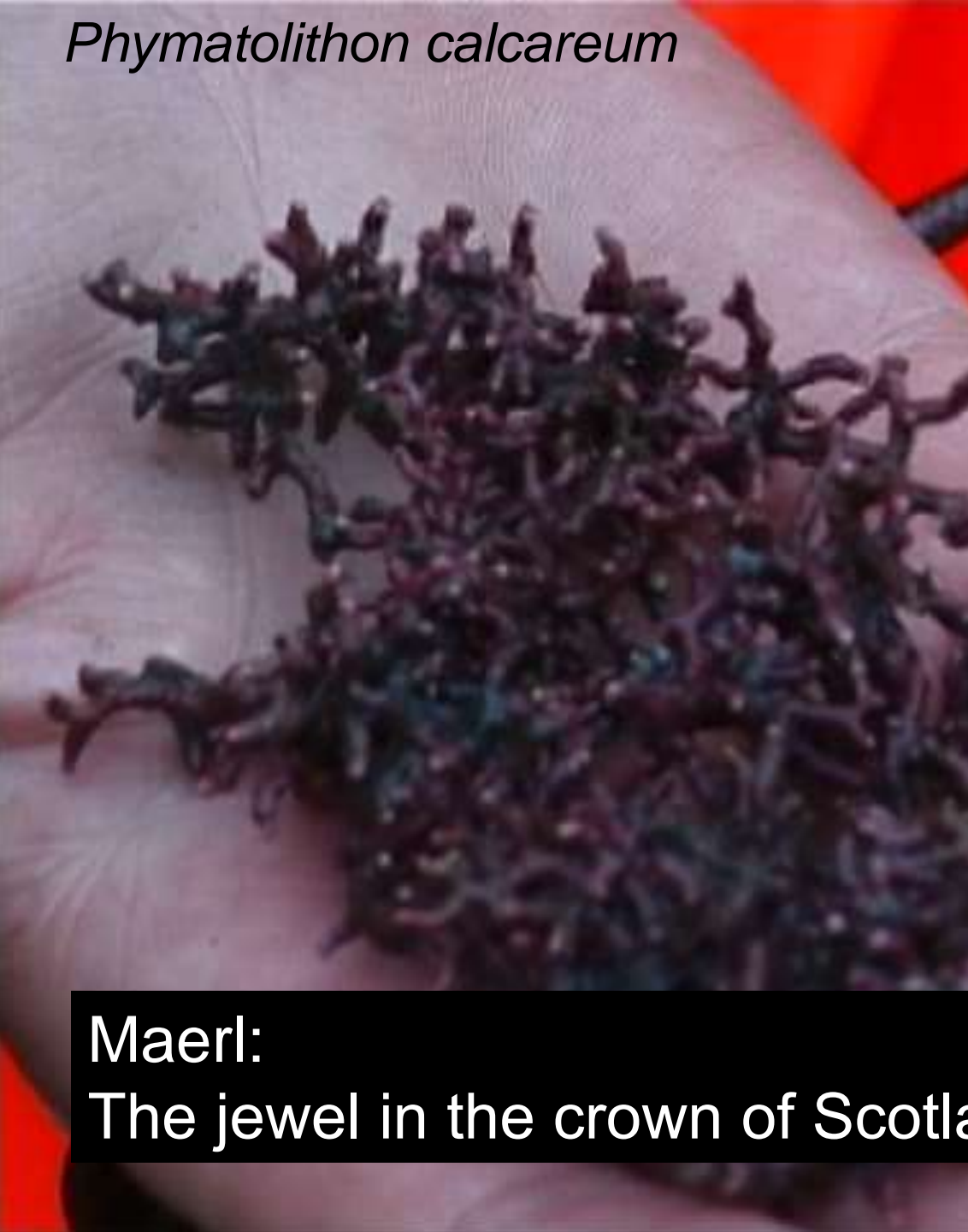
Prof Jason Hall-Spencer Universities of Tsukuba (Japan) and Plymouth (UK)



Coralline algae



Phymatolithon calcareum



Lithothamnion glaciale



Maerl:

The jewel in the crown of Scotland's natural heritage



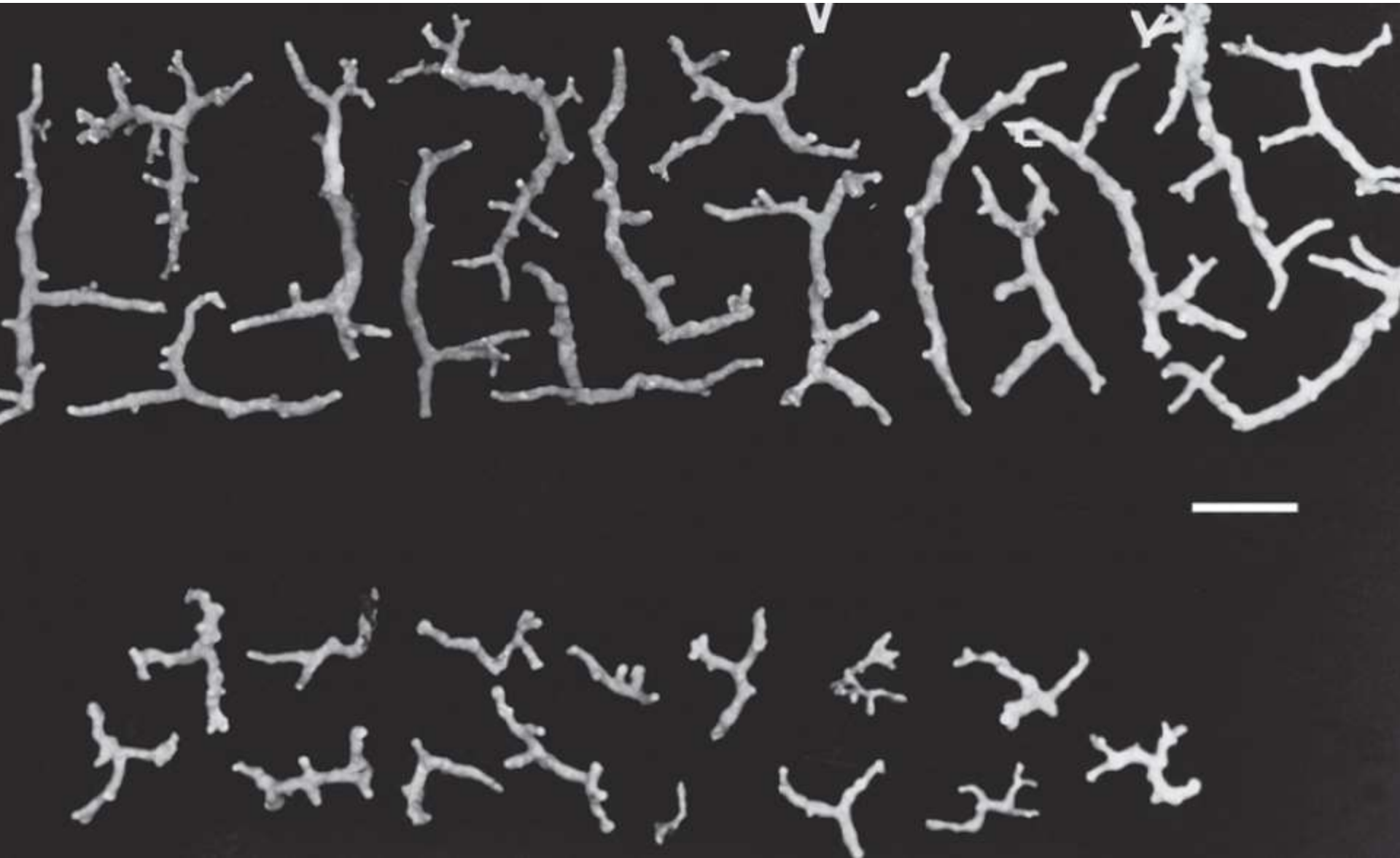


Millport Marine Station in the Firth of Clyde 1885

This firth used to have
some of the finest maerl
beds in Scotland



Size of maerl in the 1880s (top) compared with today



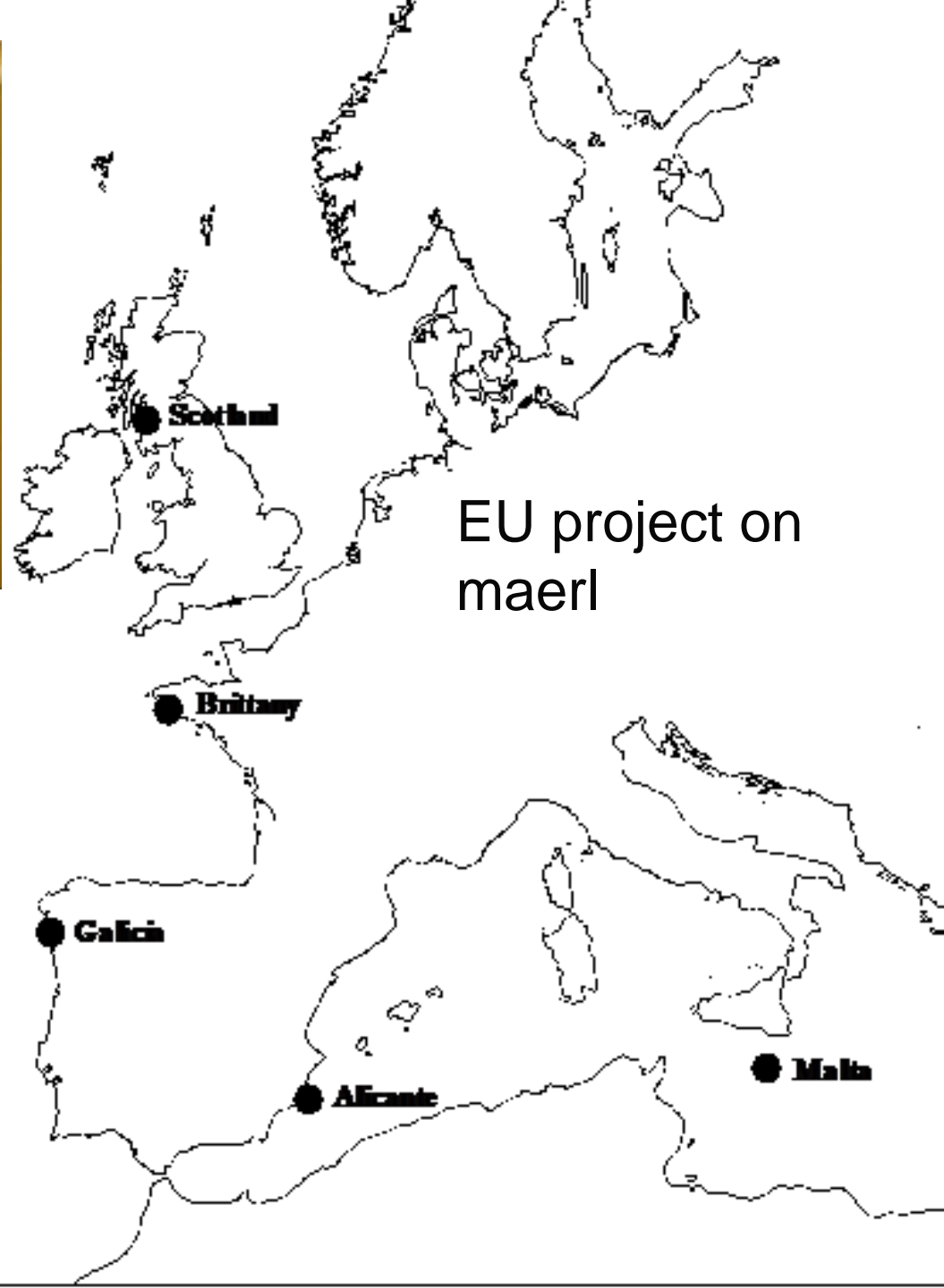
Scottish maerl beds date back 8000 -10,000 years old...but are also very fragile

Structurally complex habitats, and very very slow growing





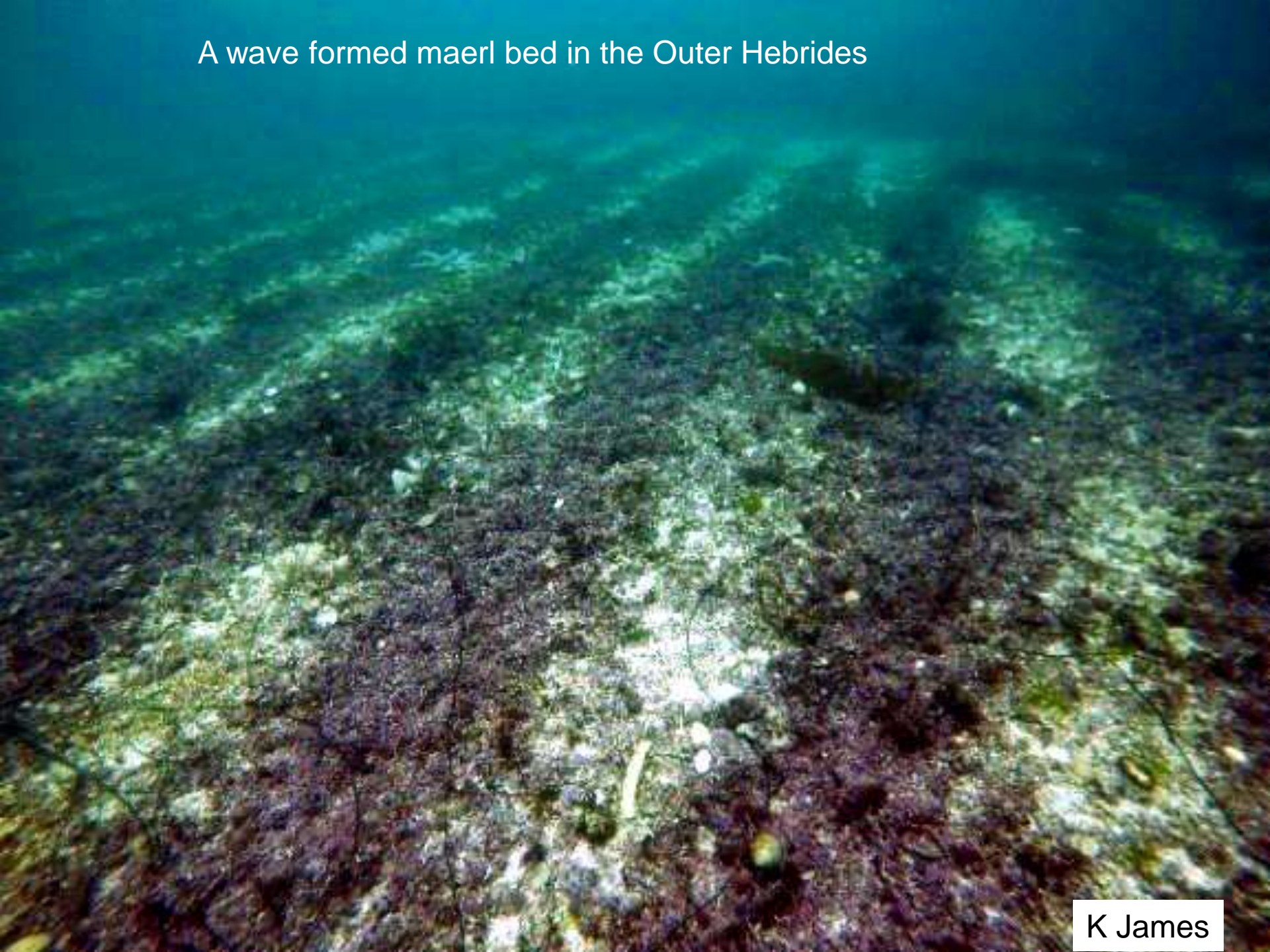
taxonomy
ecology
nutrients
fishing
aquaculture
(ecosystem services)



A tidal maerl bed in Loch Sween.



A wave formed maerl bed in the Outer Hebrides





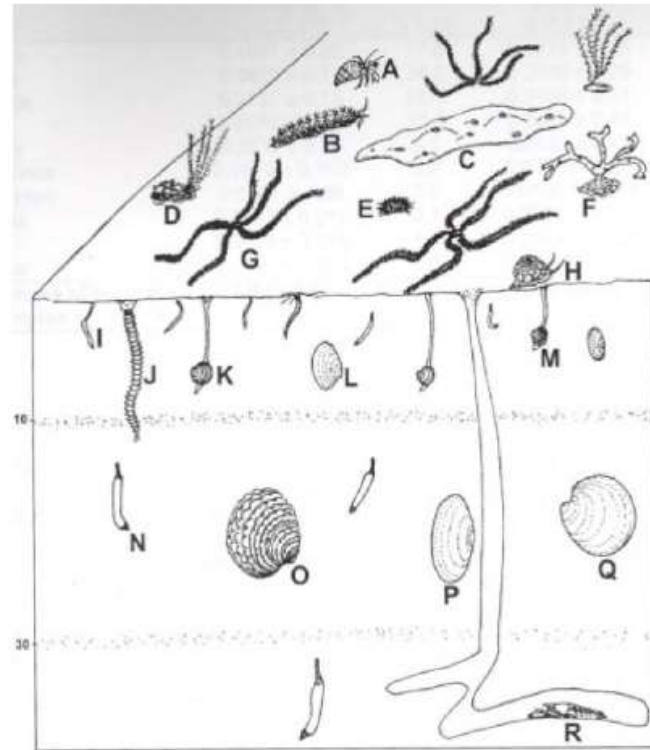
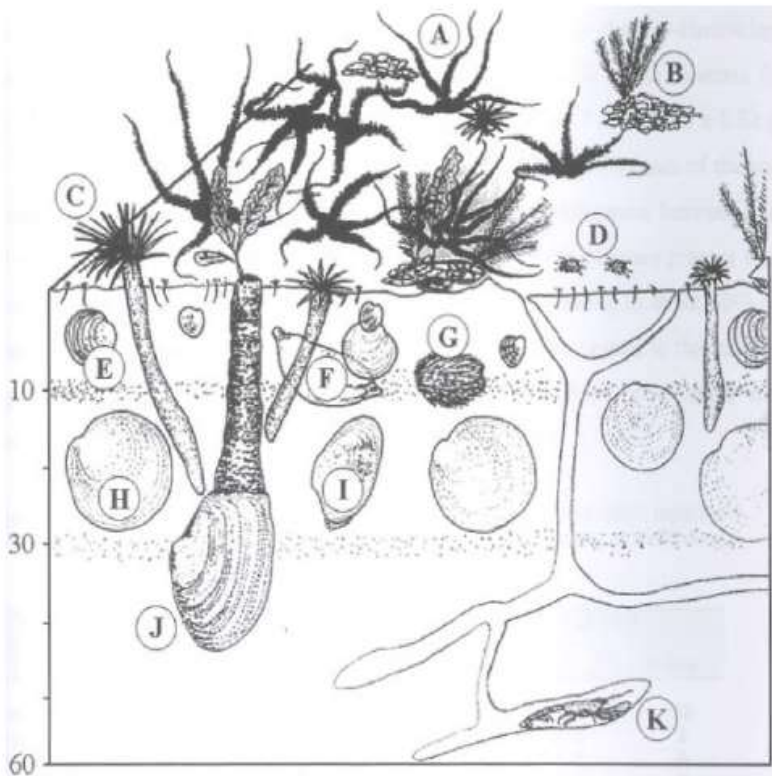
Living sediments

Seldom studied cf. kelp/coral/seagrass

Need water flow

High bivalve mollusc biomass

Maerl supports the whole web of life with 100s of species using it for spawning, nursery areas, hiding and feeding



Nursery grounds e.g. for cod



Spawning grounds e.g. for herring









FEATURE ARTICLE

Impact of fish farms on maerl beds in strongly tidal areas

Jason Hall-Spencer^{1,*}, Nicola White², Ewan Gillespie³, Katie Gillham⁴, Andy Foggo¹

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ABSTRACT: In Scotland, Atlantic salmon *Salmo salar* cages are being moved out of areas with slow water movements, to disperse wastes and reduce impacts on benthic communities. This first study of the effects of fish farms on maerl beds (red algal coralline gravels of high conservation importance) demonstrated major impacts on the benthos, even in strongly tidal areas. SCUBA surveys of 3 fish farms located over maerl revealed a build-up of waste organic matter and 10 to 100-fold higher abundances of scavenging fauna (e.g. *Necora puber*, *Pagurus bernhardus*) than on 6 reference maerl beds. Visible waste was noted up to 100 m from cage edges, and all 3 farms caused significant reductions in live maerl cover,



Farm sites: scavenging decapods
10-100 x more abundant



Impact of salmon farms on maerl beds

Loch Sheilavaig, South Uist
May 2003

Maerl triggers scallop settlement









Deposits sediment over a wide area around fished tracks

- suspension feeders suffer from clogged gills, algae are smothered

NewScientist

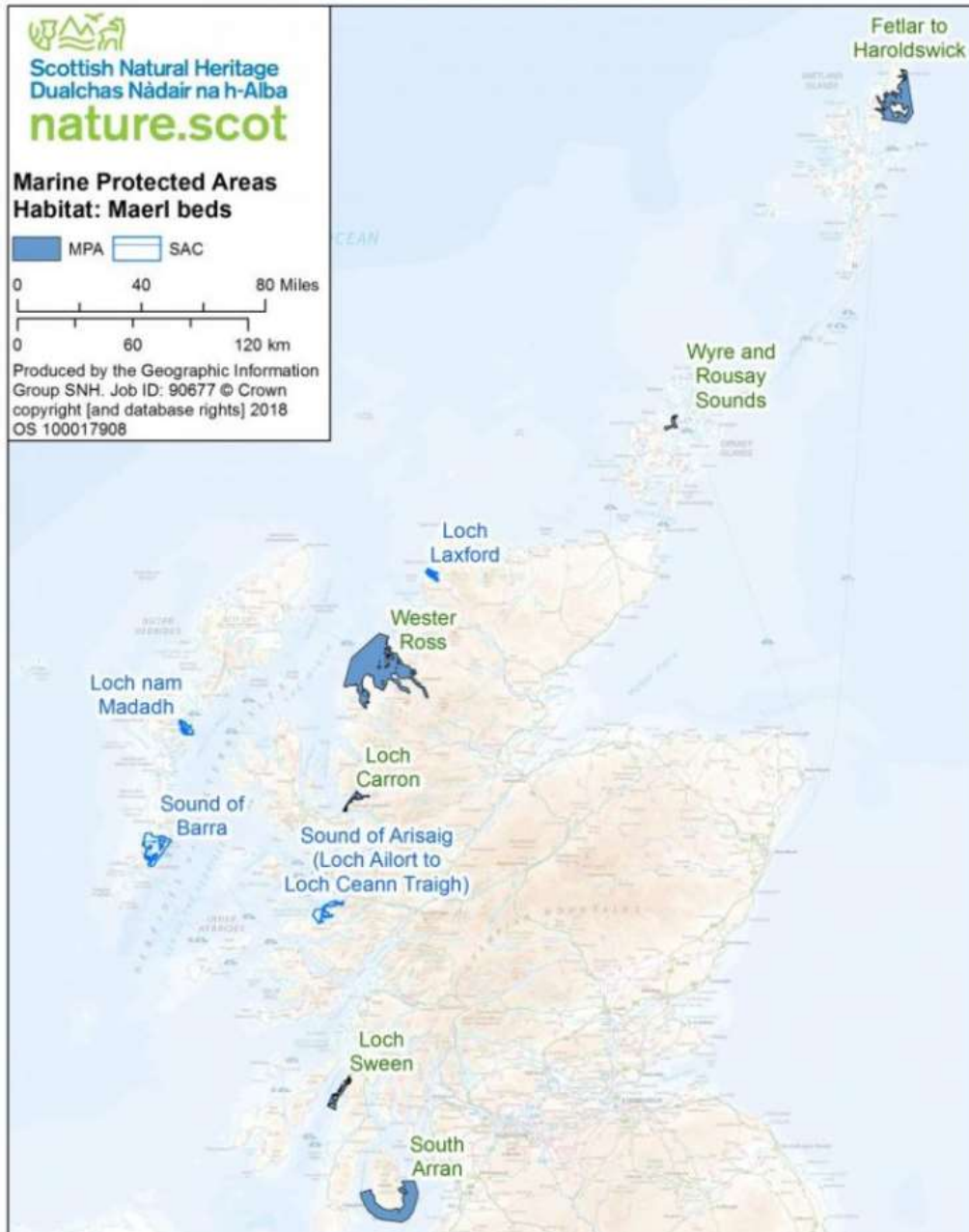
5 October 2022

Dredging in crucial habitat sparks row over UK marine protected areas

Footage showing protected Scottish waters raked clean by scallop dredgers shows that marine protected areas are "paper parks", say campaigners



Small Isles MPA
Isle of Rum



Wester Ross is really important for maerl

Wester Ross Marine Protected Area is the largest maerl MPA in the world.

The Blue Hope Alliance and local communities have worked hard to protect maerl, I applaud you!

Thanks for listening



Paul Naylor