

Microhabitat choice of cryptic species: Do closely related nematode species really occur together?

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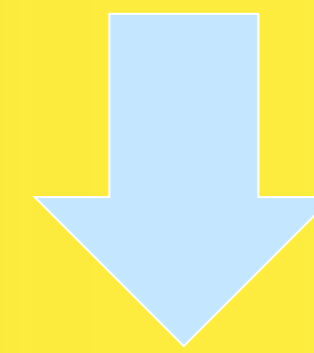
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CRYPTIC SPECIES

- ✓ morphologically 'identical' but genetically distinct species
- ✓ call into question most estimates of the existing number of species
- ✓ have strong implications on biodiversity-ecosystem functioning relations

prominent in marine environments



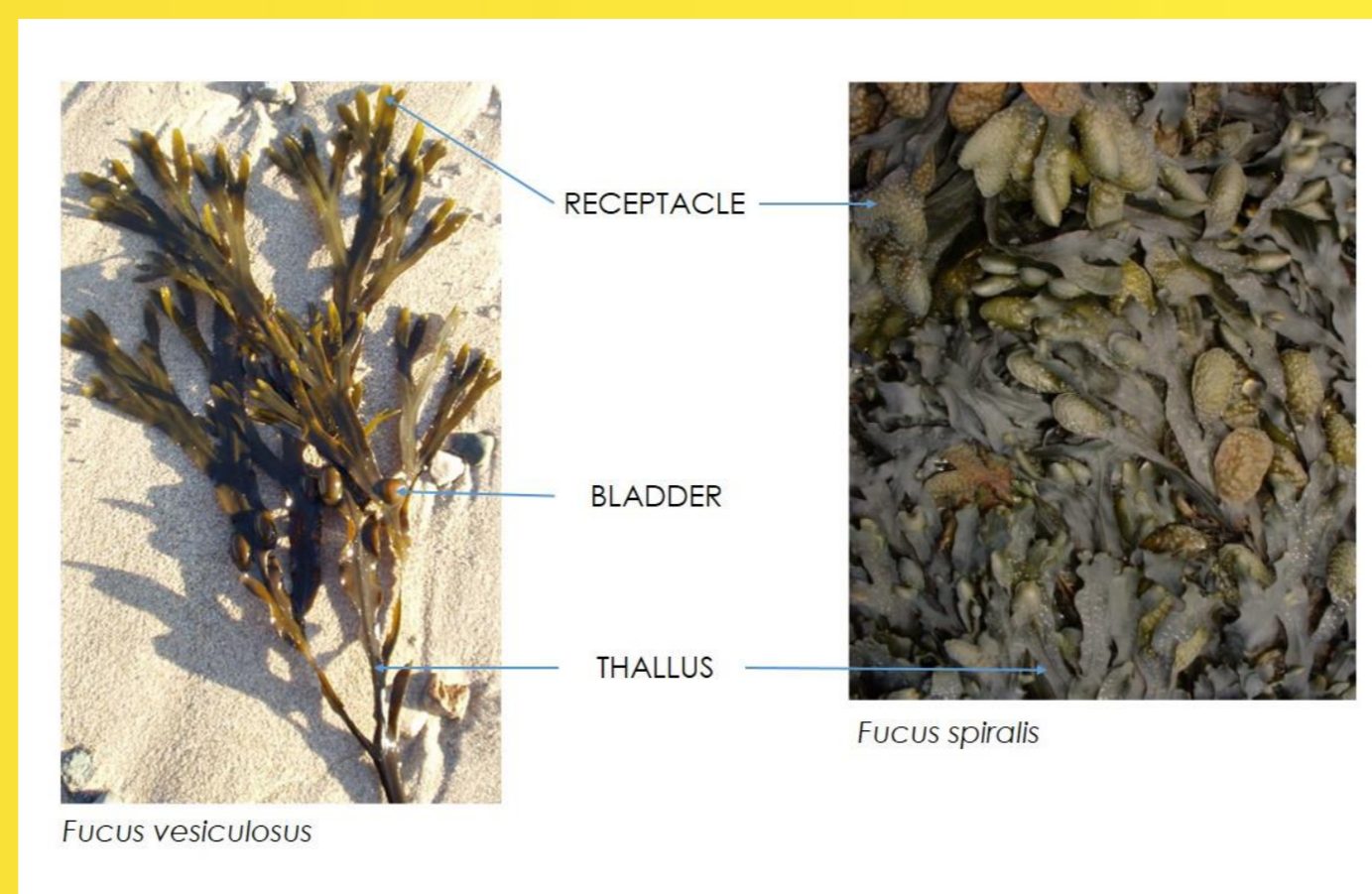
free-living marine nematodes

Litoditis marina: model organism
PMI, PMII, PMIII, and PMIV

Do they have different
microhabitat preferences?

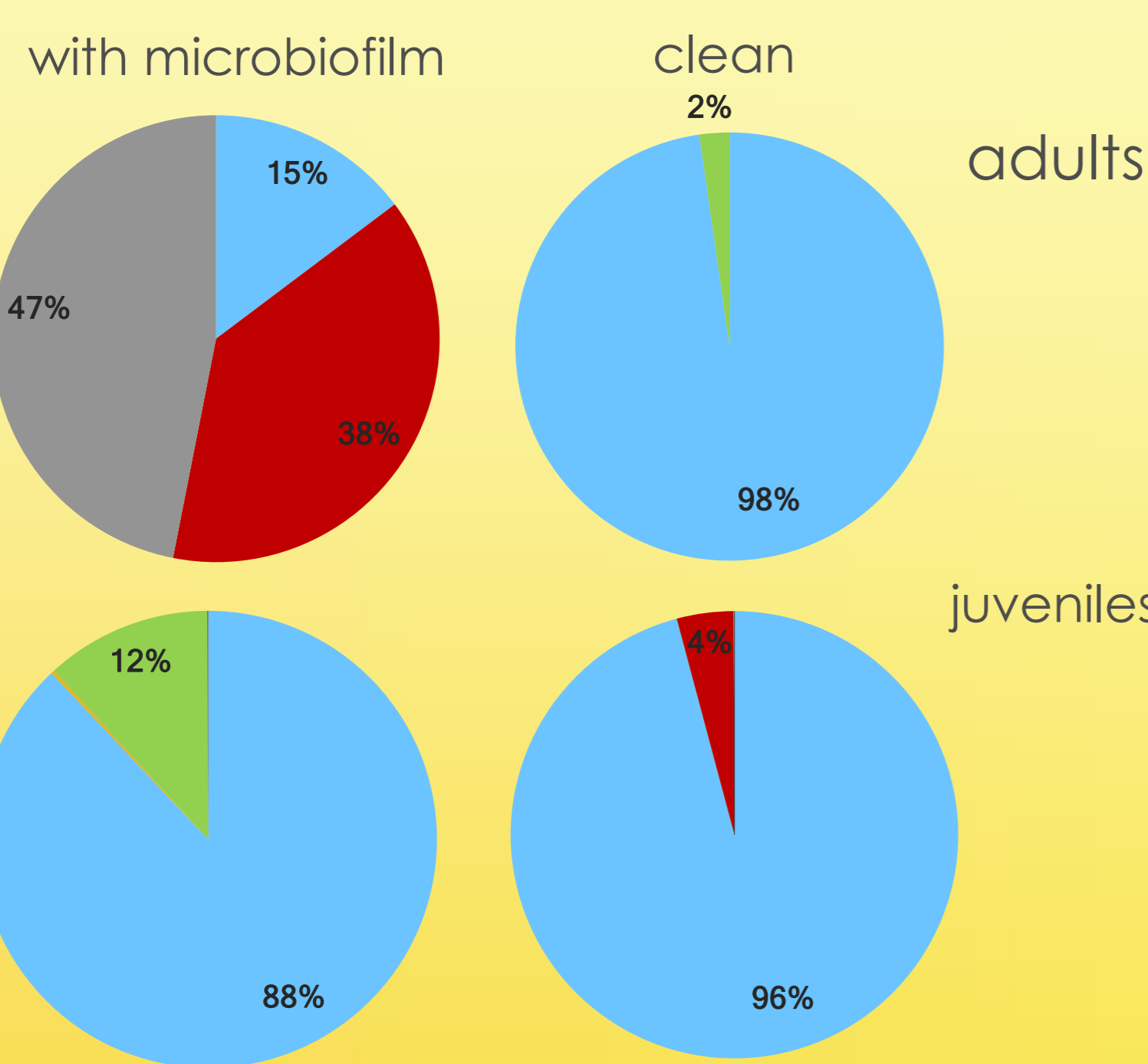
Real-time
PCR

- Clean vs. with sediment *Fucus* spp.
- Different structures of *Fucus* spp.
- Fresh vs. Decomposing *Ulva* sp. thalli
- Different species of algae

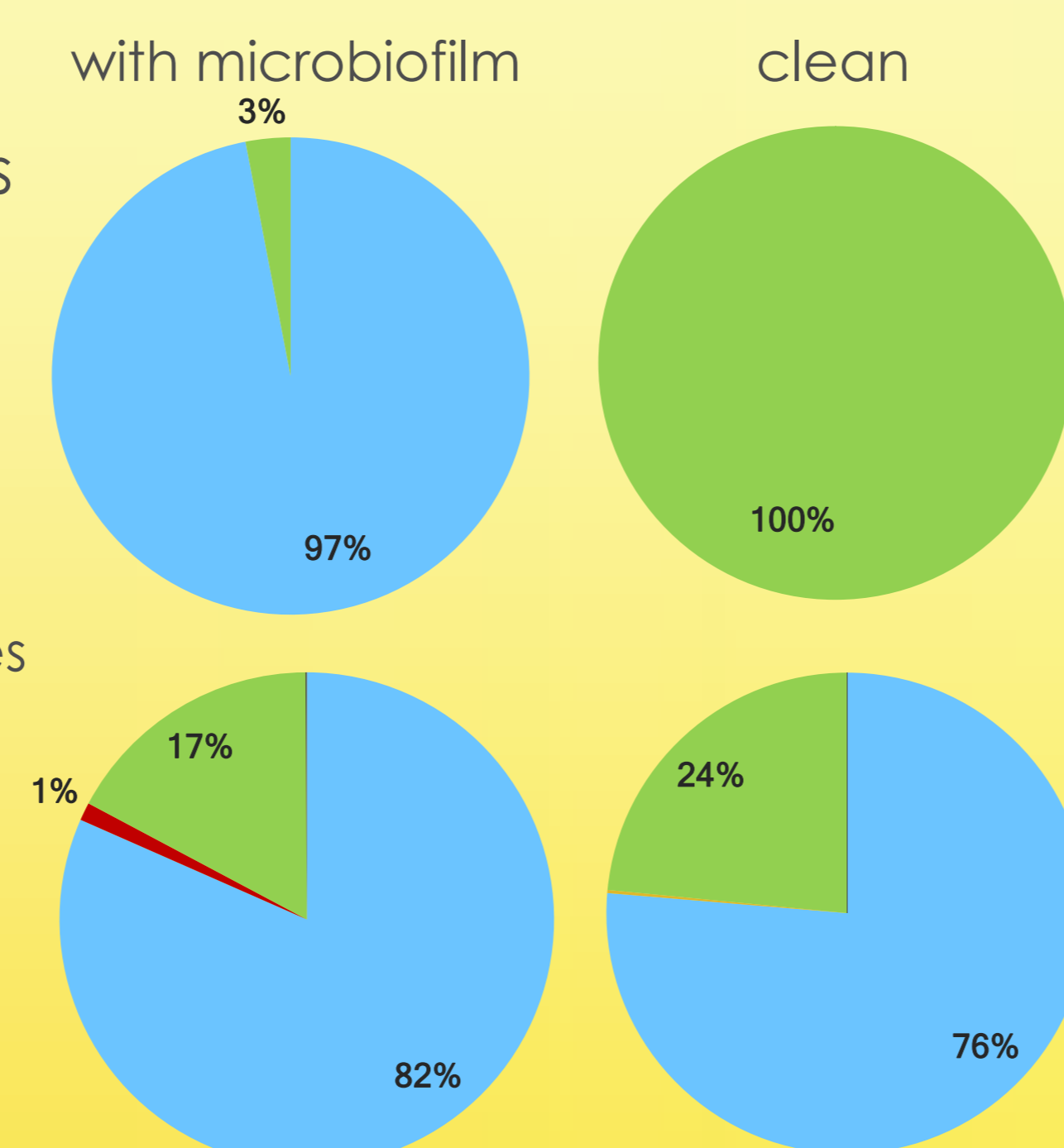


Relative abundances of the cryptic species at different microhabitats

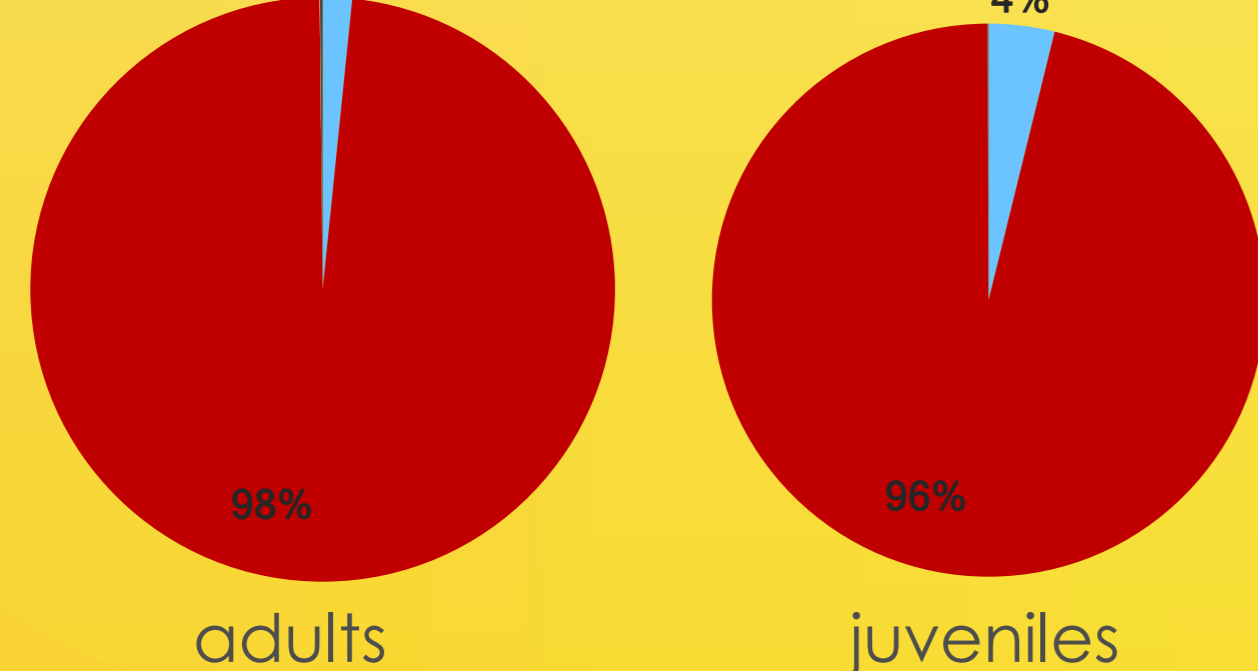
Fucus spiralis



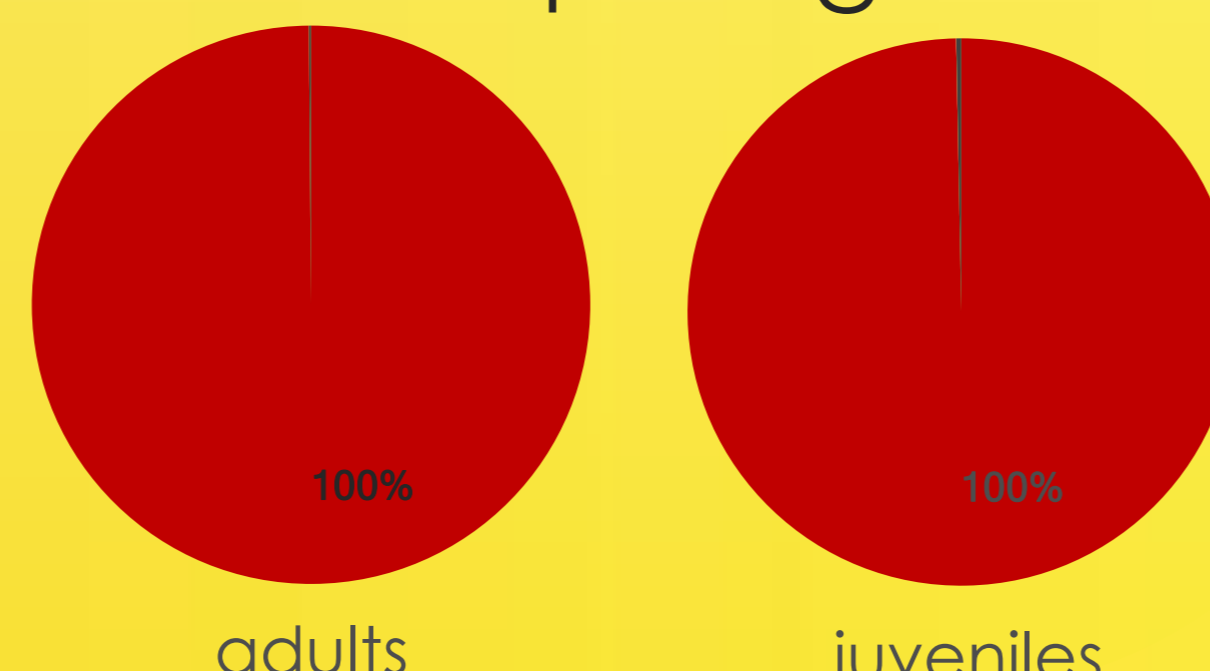
Fucus vesiculosus



Fresh *Ulva*

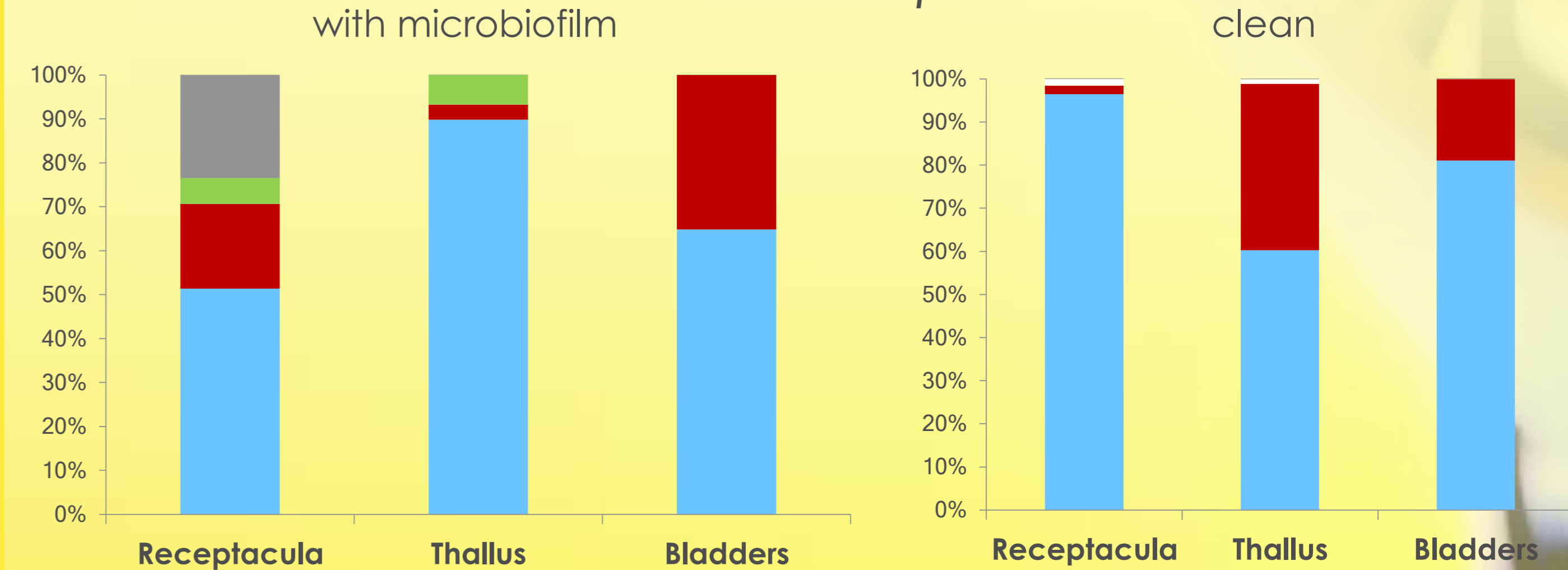


Decomposing *Ulva*

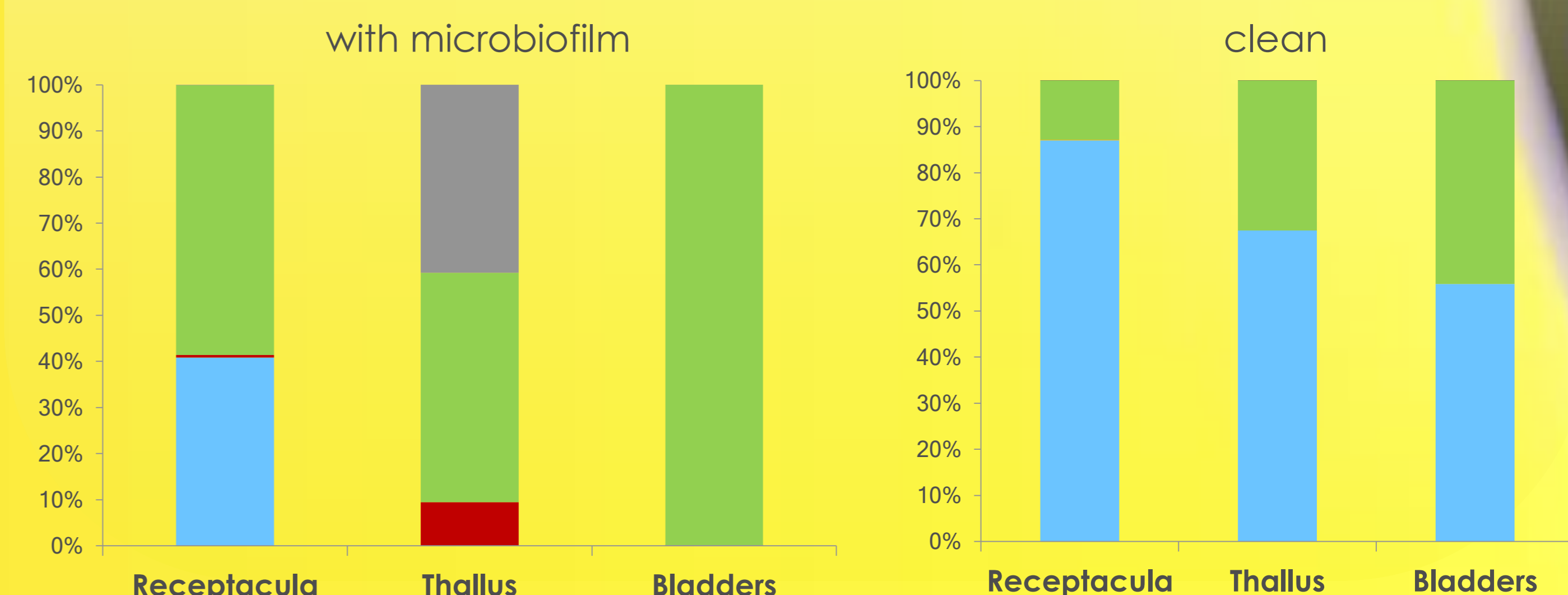


Relative abundances of the cryptic species at different parts of algae

Fucus spiralis



Fucus vesiculosus



Conclusion

- The cryptic species composition of the *Litoditis marina* complex differs:
 - ✓ at different species of algae
 - ✓ between clean and covered with microalgal biofilm *Fucus* spp. for adults but not for juveniles
 - ✓ at different parts of *Fucus* spp.
- **PMII prefers *Ulva* sp. compared to *Fucus* spp.**
- **PMI and PMIII co- occur**

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