

# Shaped by the past, creating the future

Rosemary Chalmers

Durham Castle Conference 29 & 30 July 2019



What if birds returned to the sea?

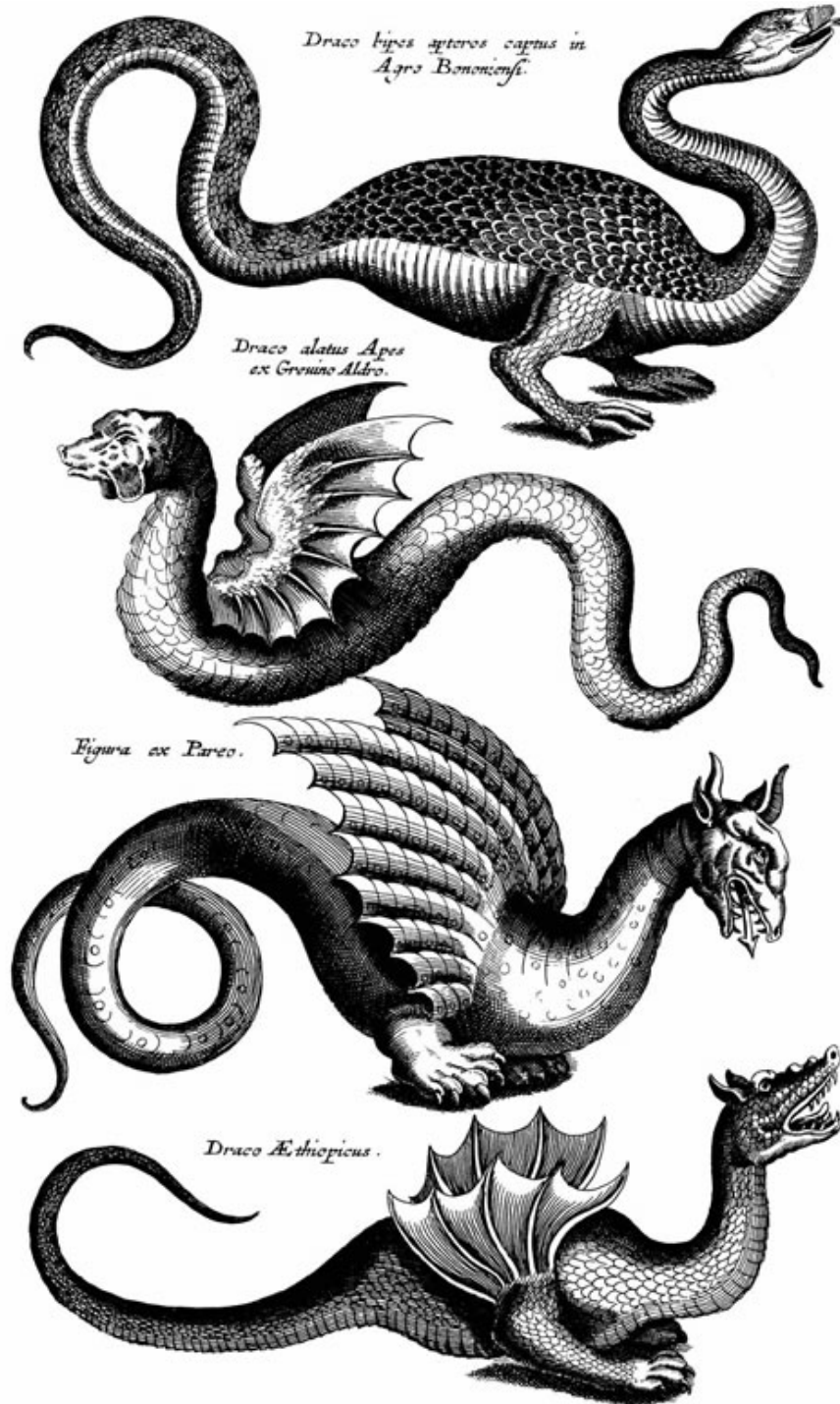
# Marine birds of the future





# Mythology-based creature design

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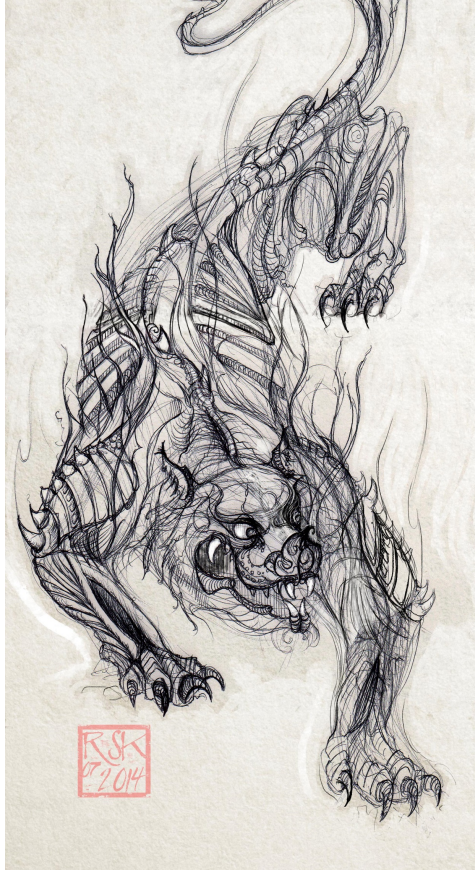


Snakes

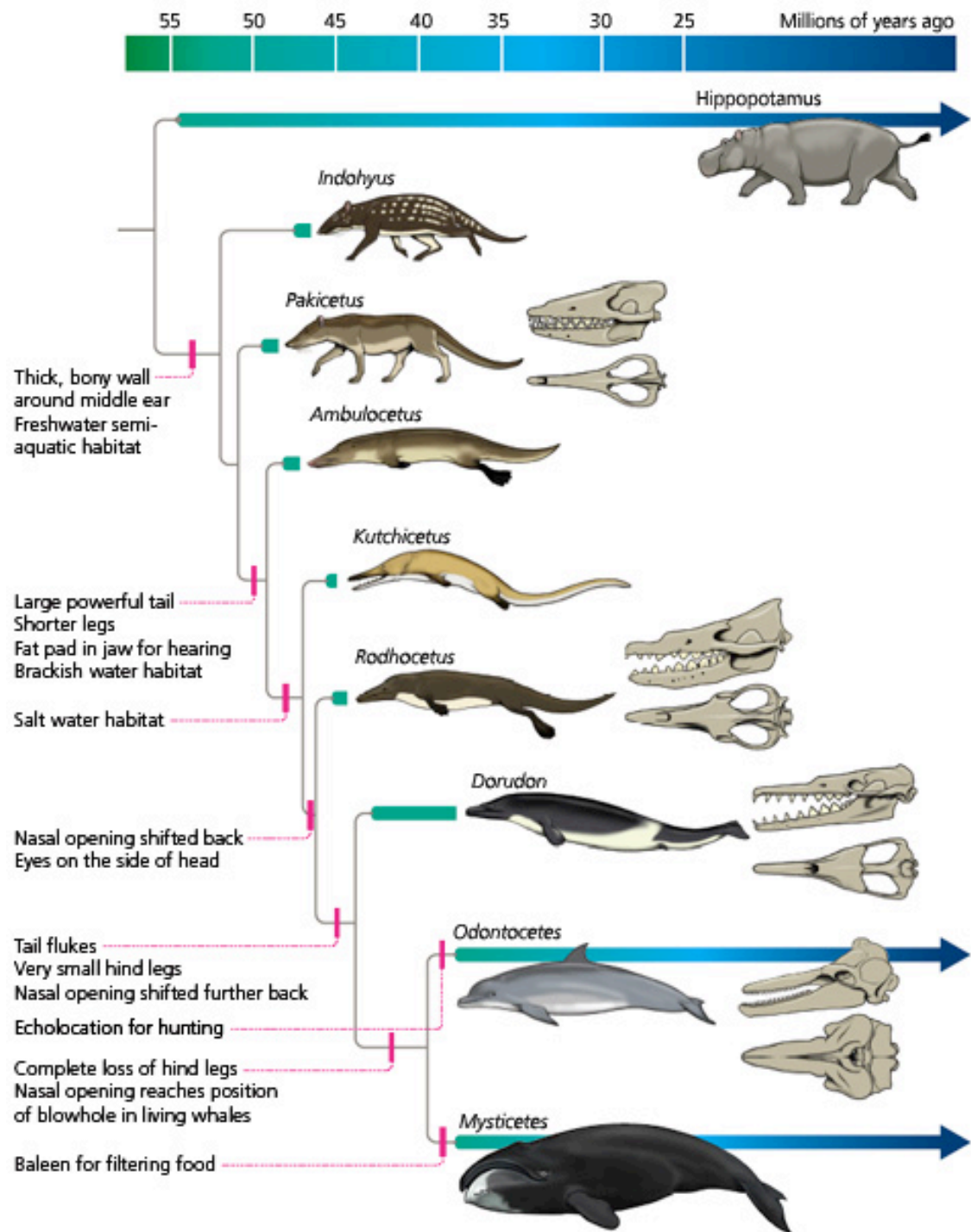
Image: The Dragon of Bologna and other dragons by Ulisse Aldrovandi (1657), included in *1300 Real and fanciful animals: From Seventeenth-Century Engravings* (Dover, 1998).

Available at: <https://www.doverpublications.com/zb/samples/402371/art9b.htm>









# Natural History-based Creature Design

Image: Whale phylogeny from *The Tangled Bank* (Zimmer, 2013).

Available at: [https://evolution.berkeley.edu/evolibrary/article/evograms\\_03](https://evolution.berkeley.edu/evolibrary/article/evograms_03)









# Habitat-based Creature Design

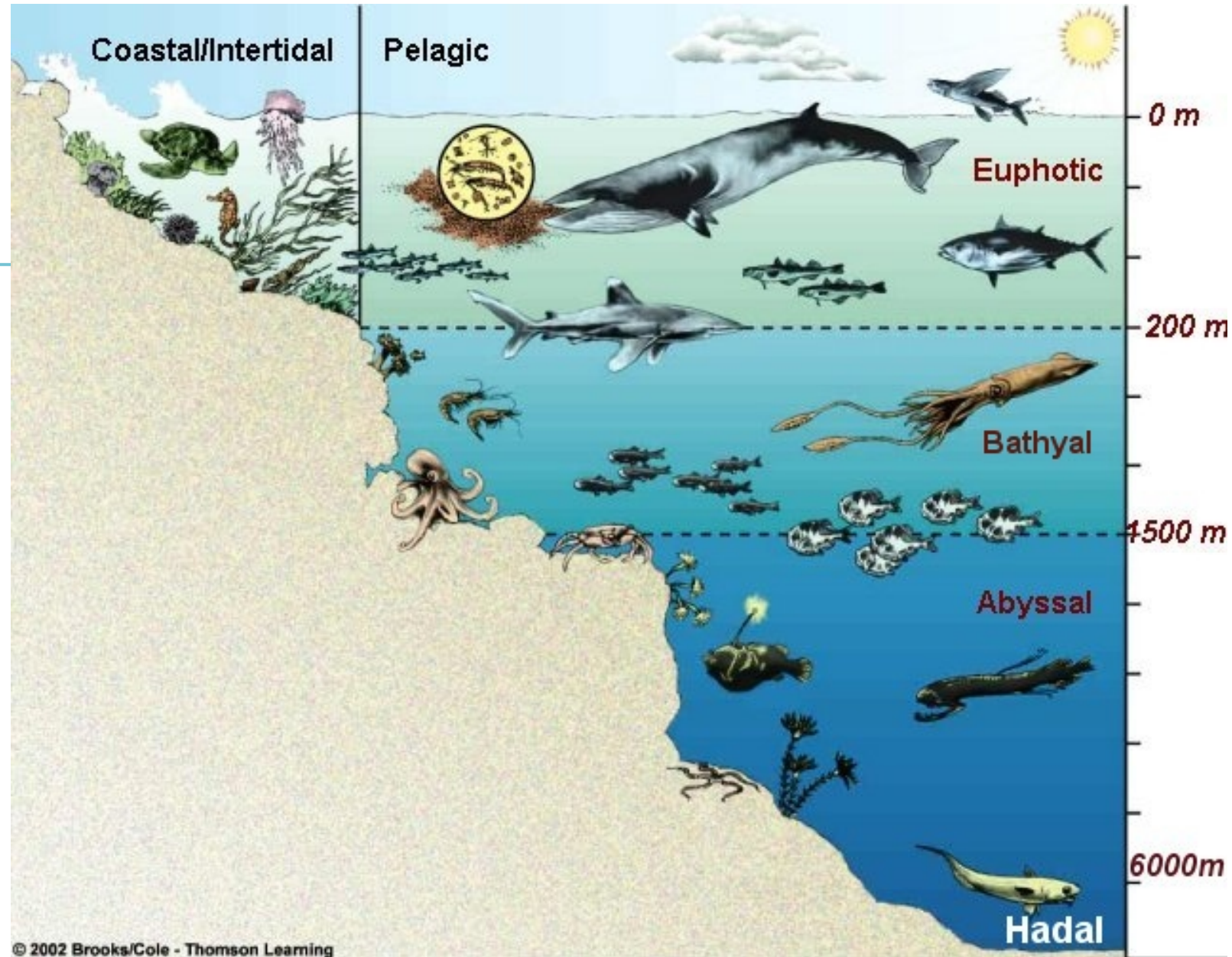
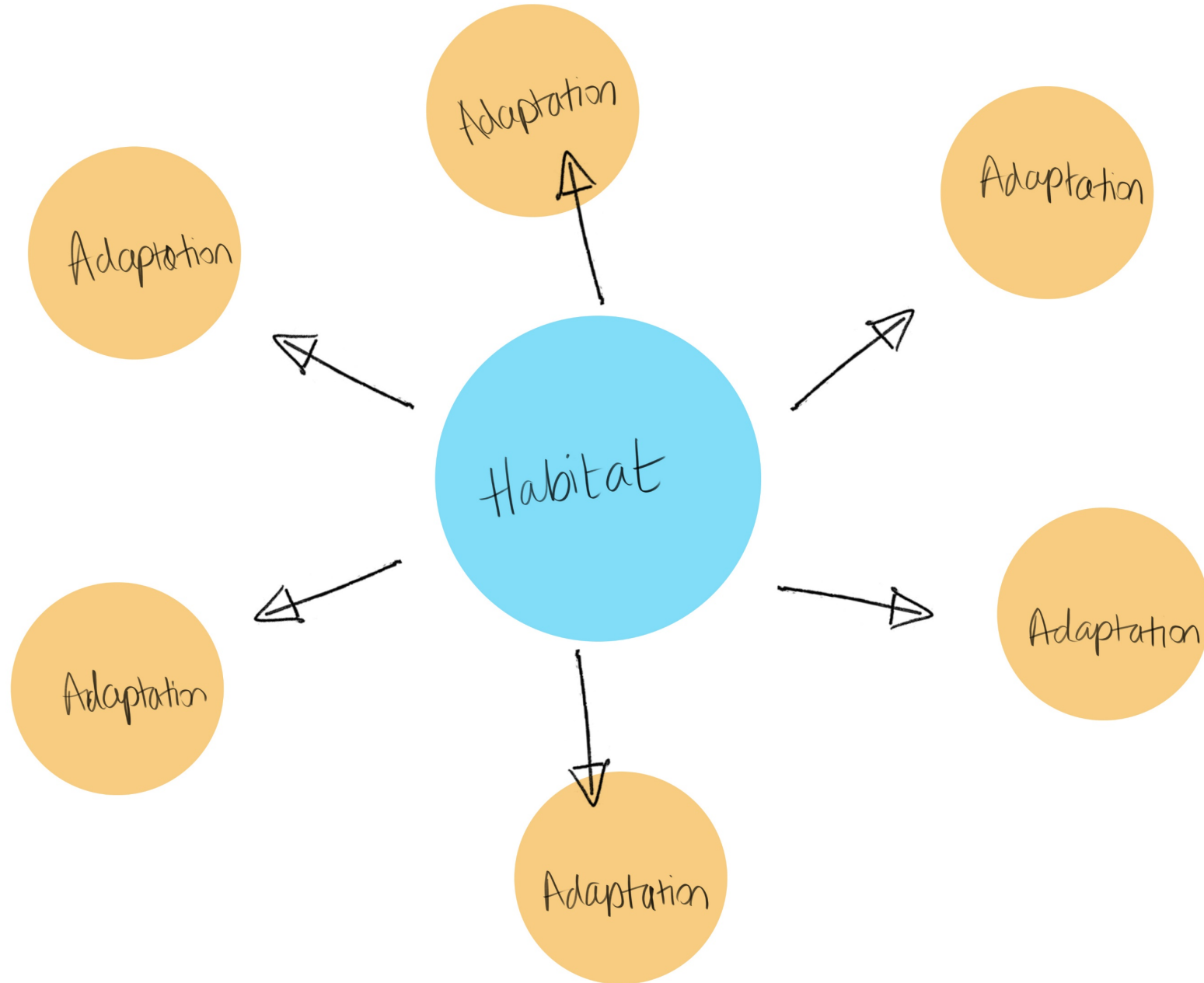


Image: Ocean zones by Thomas Learning (Brooks/Cole, 2002).

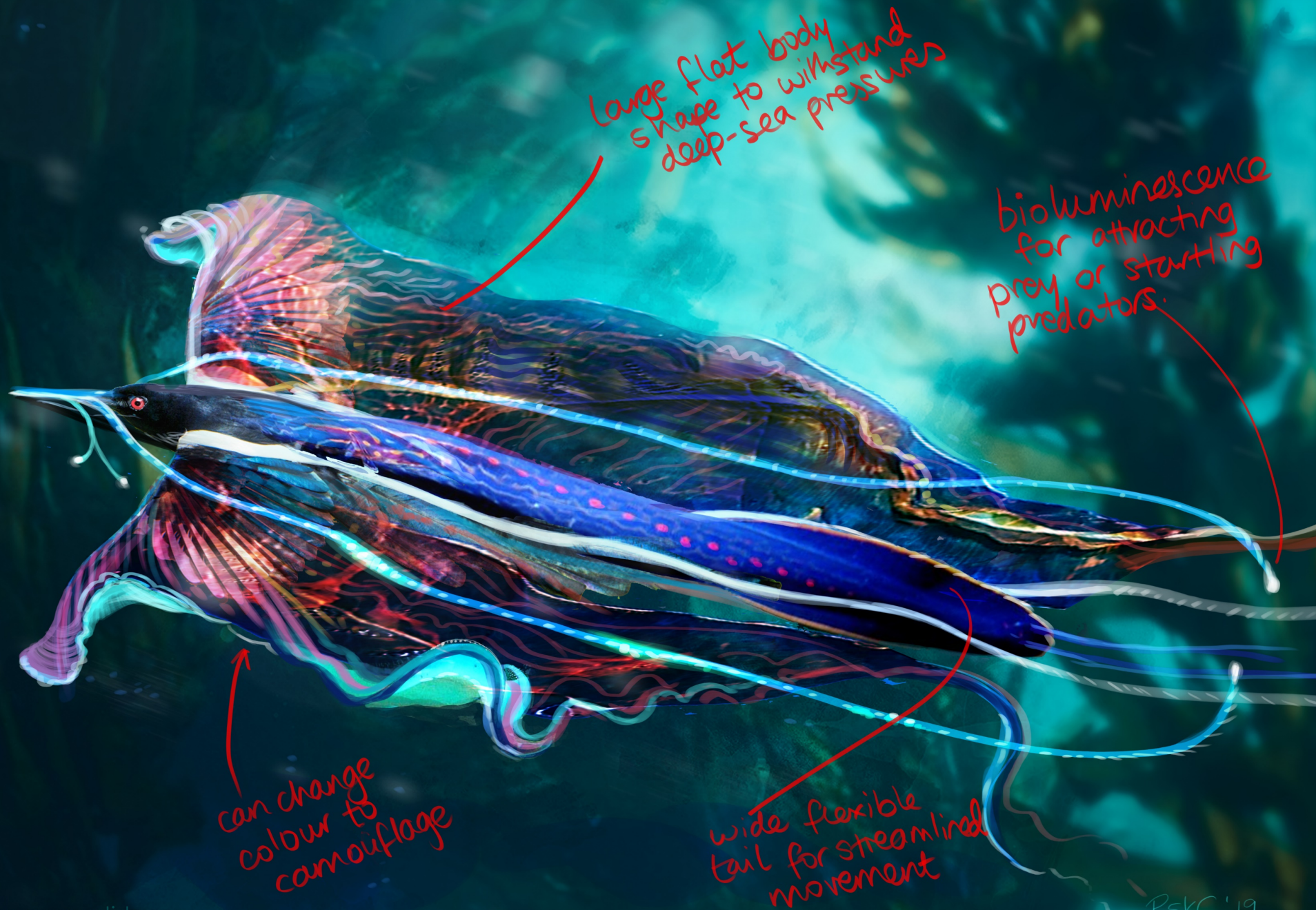
Available at: <http://parnellsschool16.blogspot.com/2012/03/ocean-layers.html>















## Adaptation-based Creature Design

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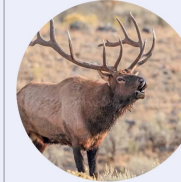


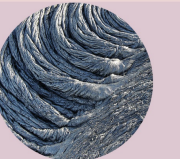
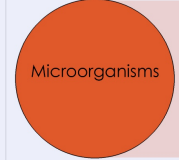





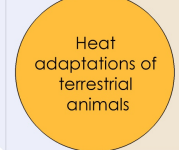






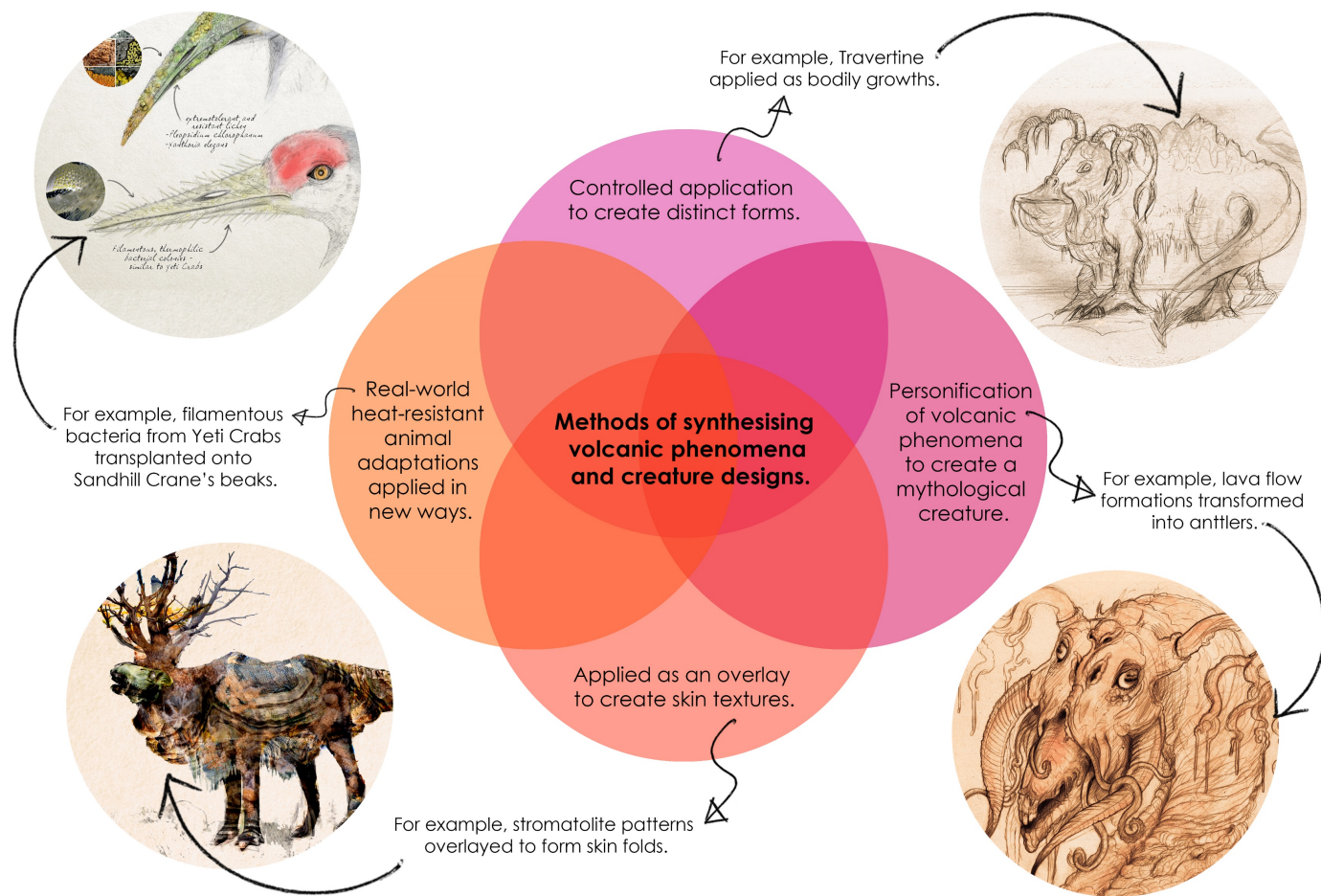
## SciArt Center Collaborative Residency: The Bridge

### *SciArt Creature Design formula*

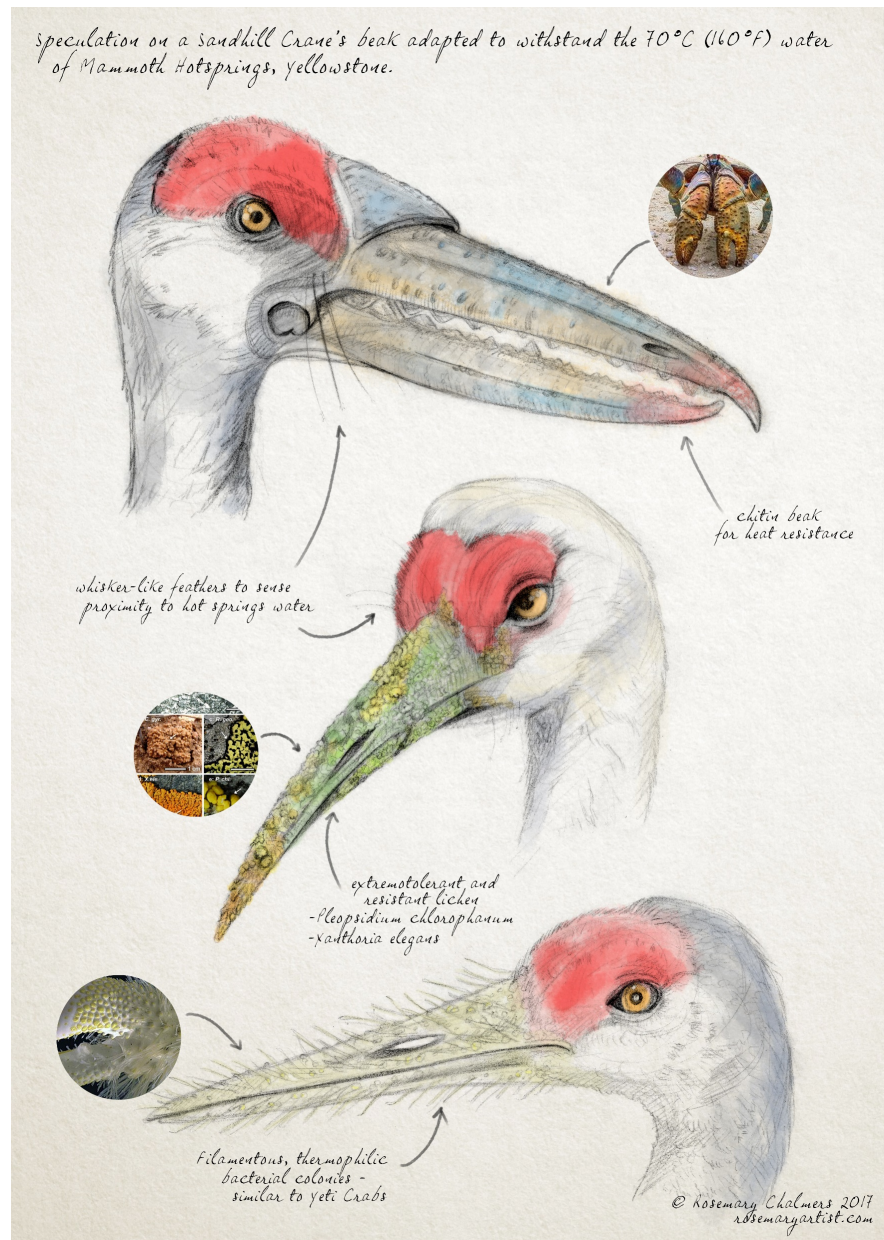
The process used to develop a fantasy creature that was believable and intrinsically inspired by volcanic phenomena.

<i>Habitat</i>	<i>Base animal</i>	<i>Influences &amp; inspiration</i>	<i>Real-world reference</i>
 <i>Mammoth Hot Springs</i>	 <i>Elk</i>	 <i>Volcanic phenomena</i> <i>Lava flow feature</i> <i>Lava folds texture</i>	 
		 <i>Microorganisms</i> <i>Stromatolites</i> <i>Bacterial mats</i>	 
		 <i>Adaptations of hydrothermal creatures</i> <i>Hydrothermal worms</i> <i>Vulcanoctopus</i>	 
		 <i>Heat adaptations of terrestrial animals</i> <i>Camels</i> <i>Turkey vultures</i>	 



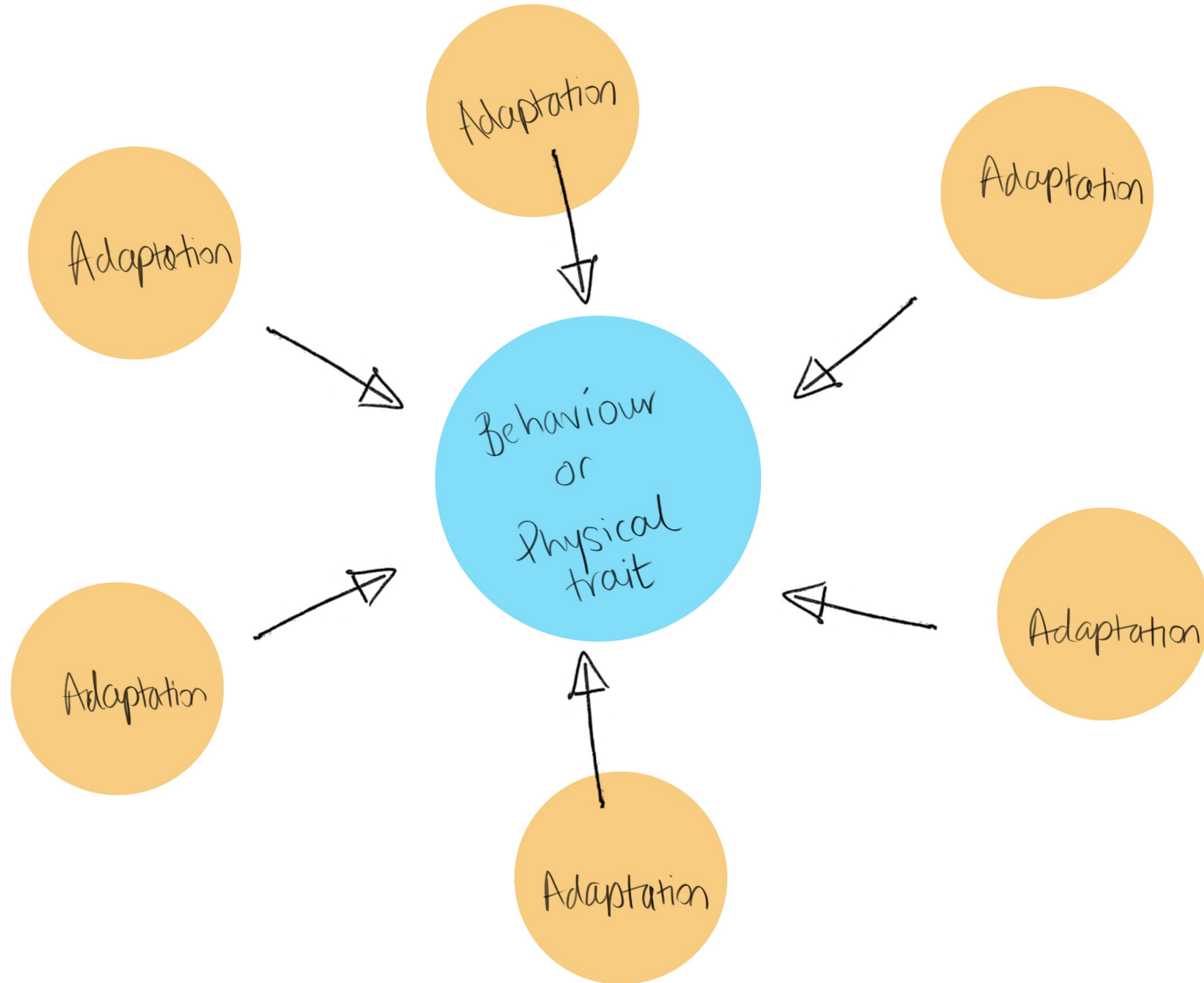


*The bridge: Experiments in science and Art // Rosemary Chalmers // [www.rosemaryartist.com](http://www.rosemaryartist.com)*

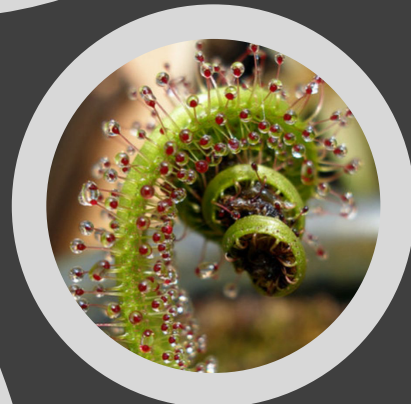








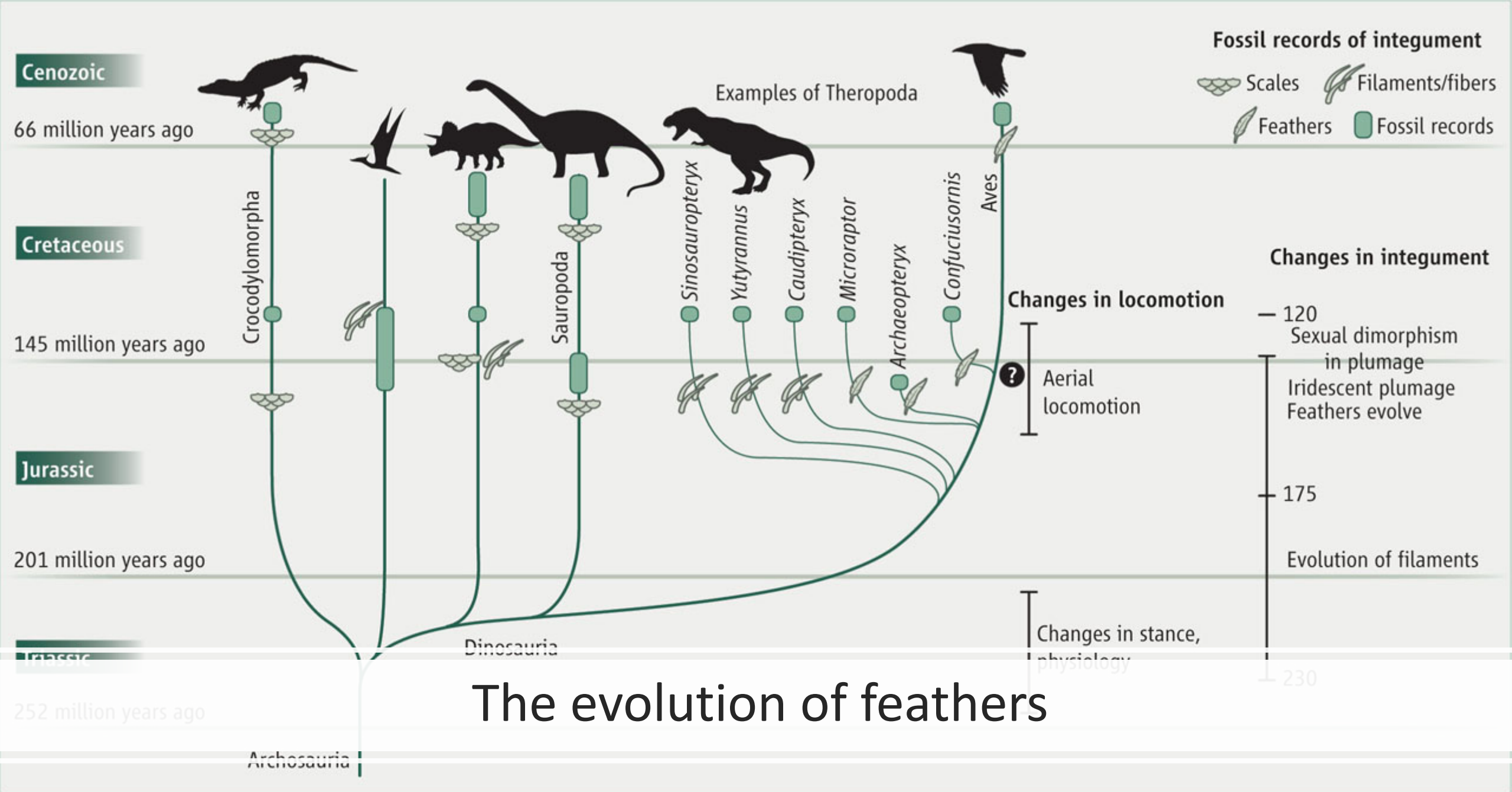




Speculation on tentacle  
convergent evolution









# Sundews (Drosera)

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Tentacle (botanical)



Image: *South African King Sundew* by Fefferman, D (2017)  
Available at: <https://carnivorousplantresource.com/the-plants/sundews/south-african-king-sundew/>

Glandular hairs



Image: *Capensis Closeup* by "incidenceatrix" (2014). Used under licence: [CC BY 2.0](https://creativecommons.org/licenses/by/2.0/). No changes made.  
Available at: <https://www.flickr.com/photos/incidenceatrix/12283174944/>



# Symbioses

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## ‘Pom-pom’ crabs and anemones



Image: *Lybia leptochelis* by Schnytzer, Y. (2017)  
Available at: <https://news.nationalgeographic.com/2017/01/crabs-anemones-pom-pom-clones-fight/>

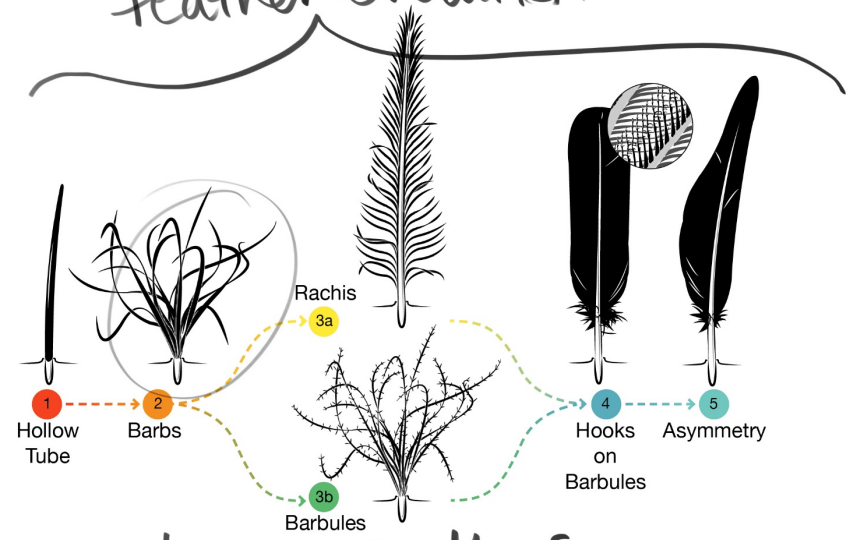
## ‘Yeti’ crabs and filamentous bacteria



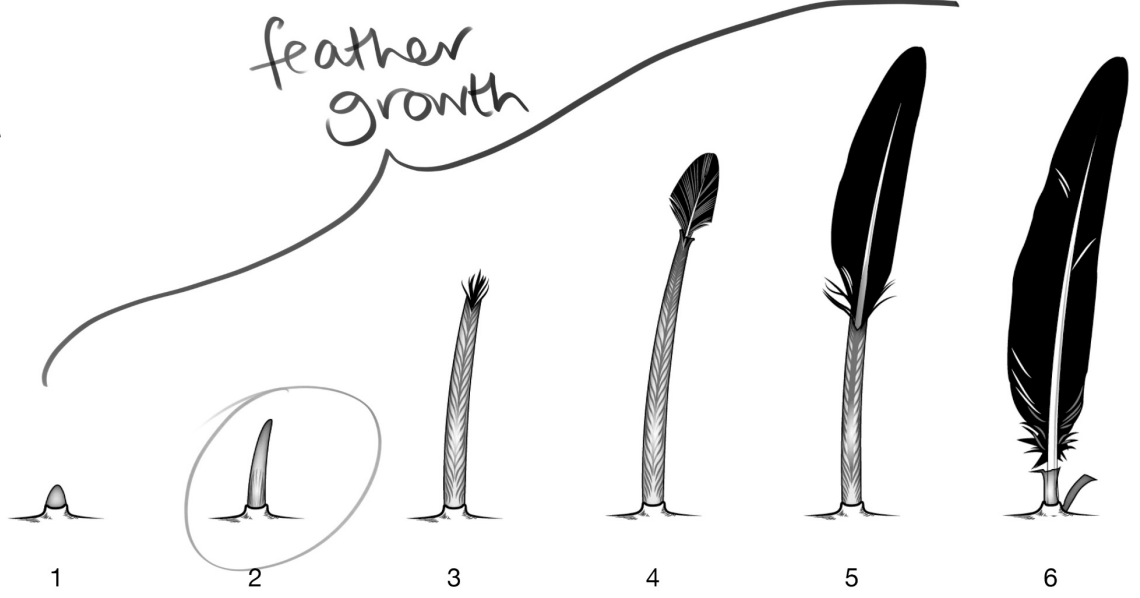
Image: *Kiwa hirsuta* by Ifremer / A. Fifis (2005)  
Available at: <https://www.mbari.org/discovery-of-yeti-crab/>



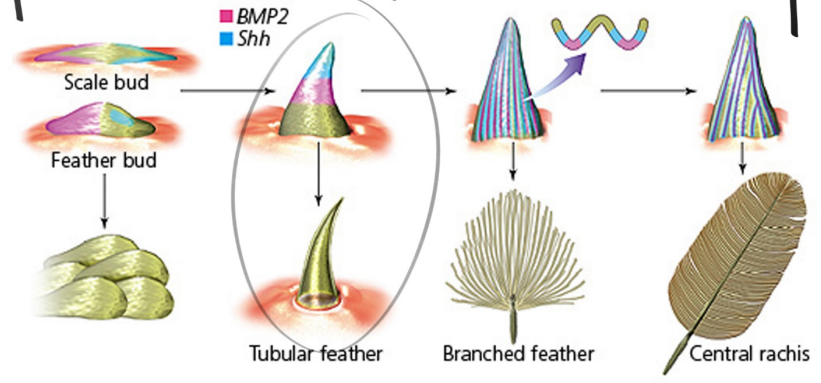
# feather evolution



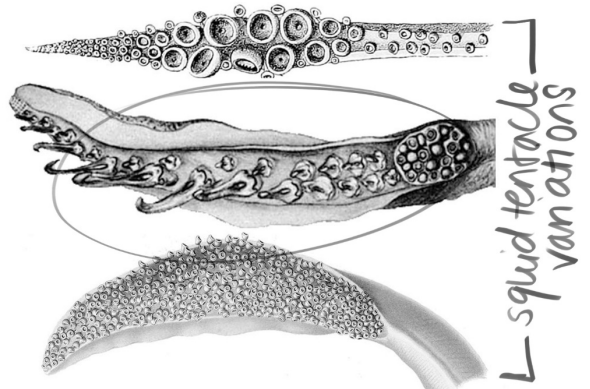
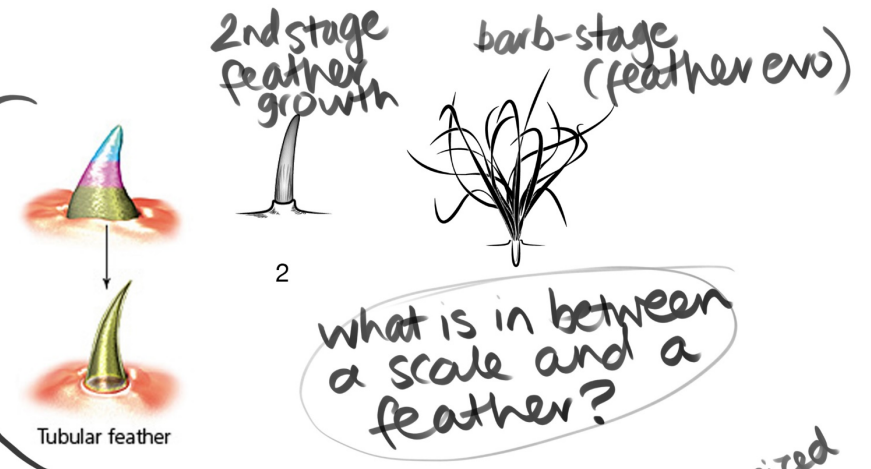
# feather growth



# scales vs. feathers

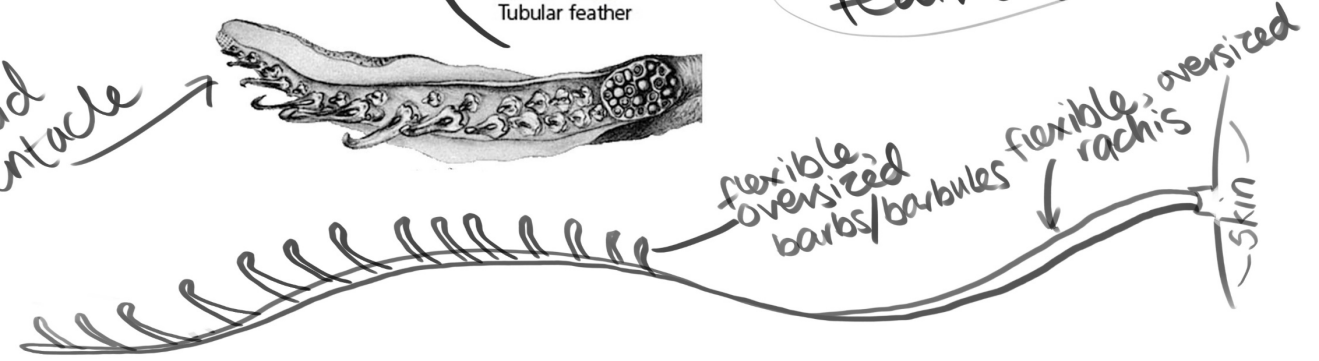
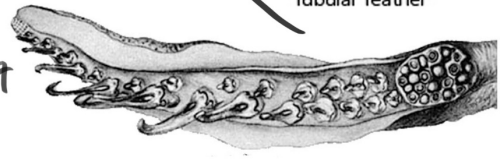


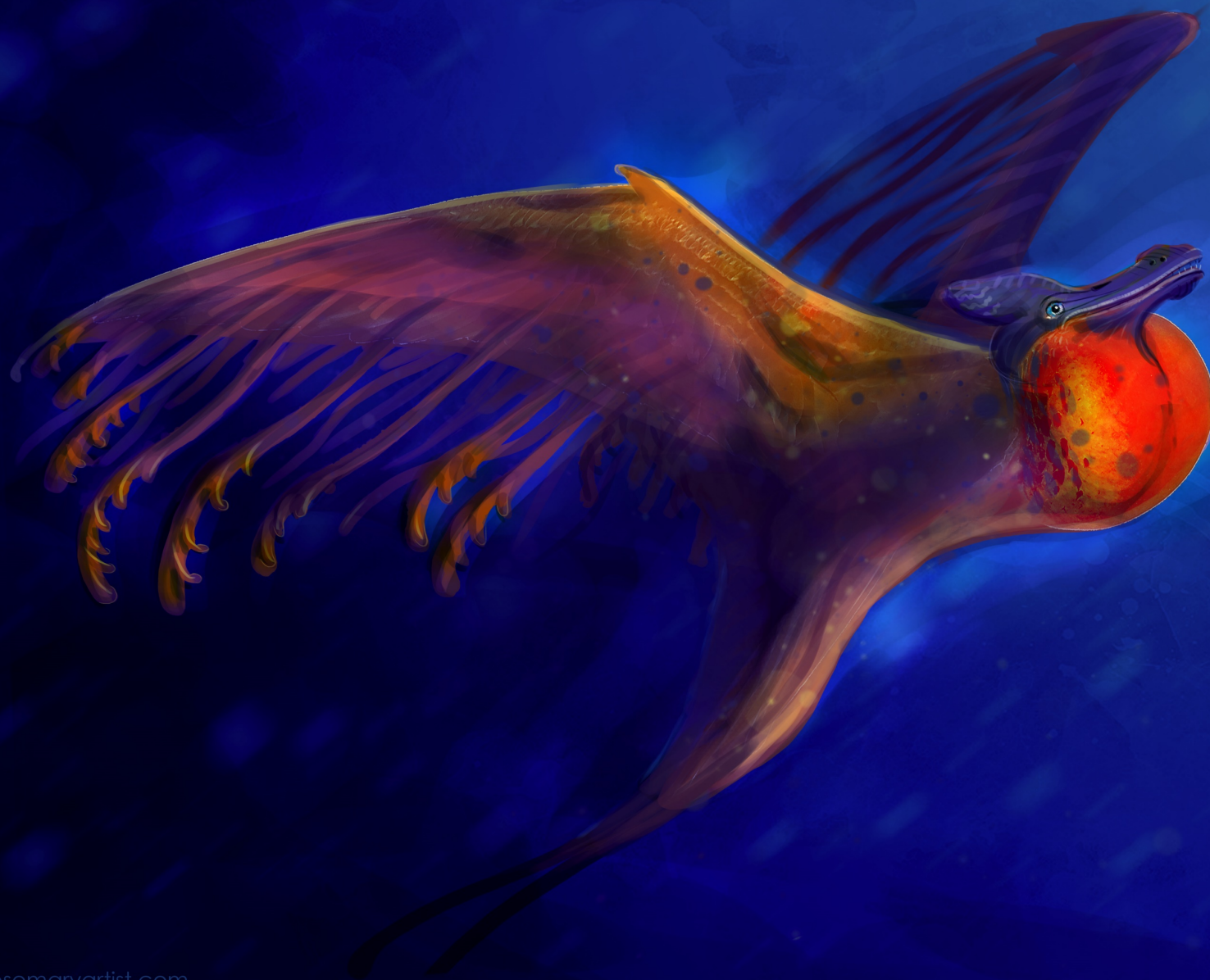
2nd stage  
scale  
vs  
feather  
evo



← squid tentacle variations

Squid tentacle





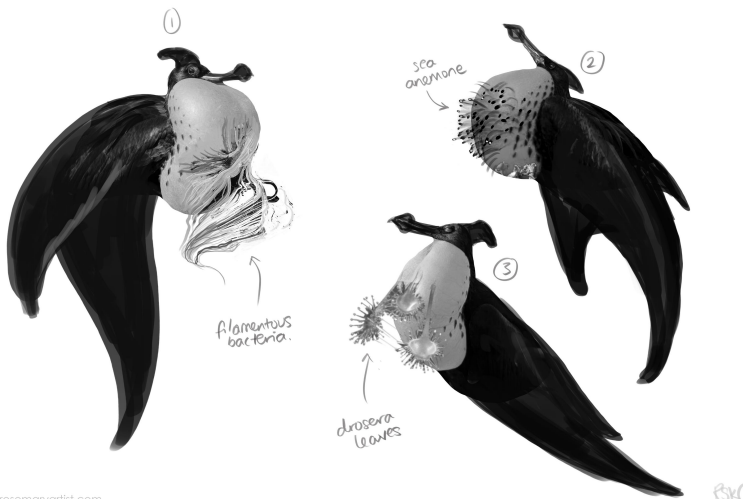
RskC19



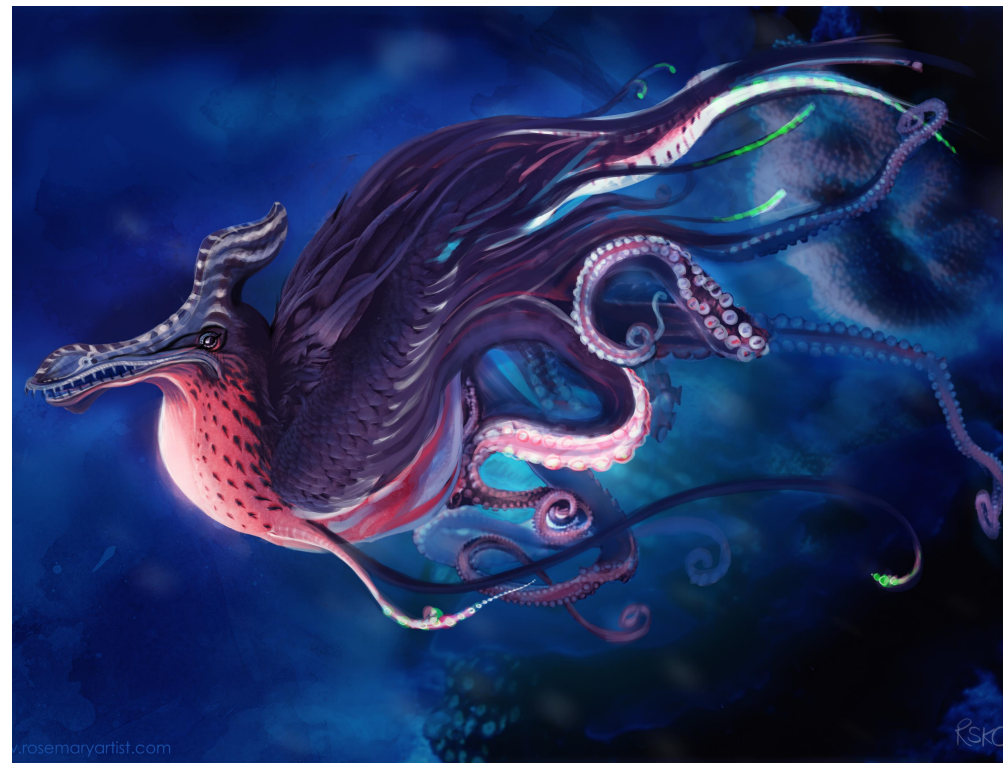




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The Blenheim Walk Gallery  
29 August – 10 October

# Rosemary Chalmers

## Creature Design: ex femina

With Terryl Whitlatch, Brynn Metheney,  
Kate Pfeilschifter and Iris Compiet

Rosemary Chalmers is Course Leader in Comic and Concept Art at Leeds Arts University. Her research explores speculative biology, world-building and believability in creature design with the aim to instill curiosity and concern for biodiversity. She is also interested in the visibility of women in the field of creature design.

Creature Design: ex femina draws together Chalmers' own research-practice alongside internationally renowned concept artists, Terryl Whitlatch, Brynn Metheney, Kate Pfeilschifter and Iris Compiet.

The exhibition proposes that Creature Design is a distinct discipline, drawing on science, art and design. ex femina inquiries into women's experience, understanding and positioning of this practice.

**Preview:**  
5–7pm Wednesday 28 August

**Light Night:**  
Thursday 10 October

rosemaryartist.com  
@rosemaryconceptartist

Image: Rosemary Chalmers, Finnish long-tailed magpie-jay: Pica infaustus ornithomimus, 2018. Graphite on paper. Image courtesy of the artist.



*The Finnish long-tailed magpie-jay.*  
*PICA INFAUSTUS ORNITHOMIMUS.*