

How to link modern and ancient barrier island systems: dimensional comparisons and updated sedimentary facies models

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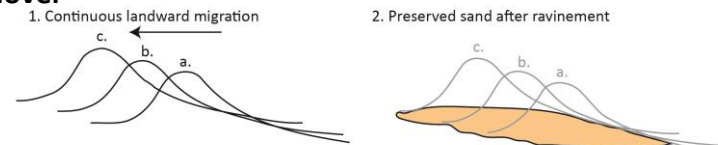
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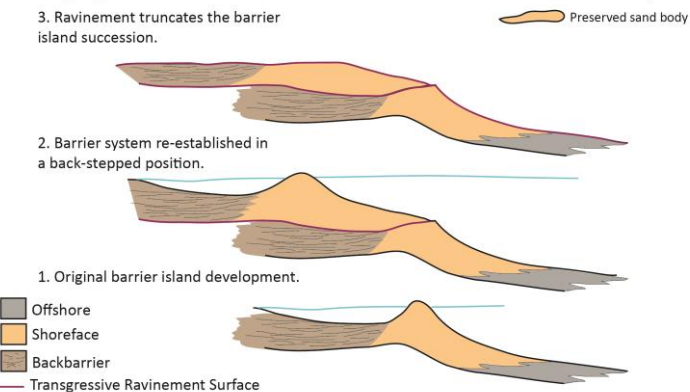
Key Points:

- Barrier island outcrops record multidirectional island motion, reworking, and erosion.
- Dimensional comparisons show that modern and ancient barrier islands do not scale one to one, rather ancient examples are time-transgressive.
- Consequently, barrier island motion and preservation models (rollover and back stepping) developed for the modern, merge at geologic time scales, resulting in complex outcrop geometries.

Rollover

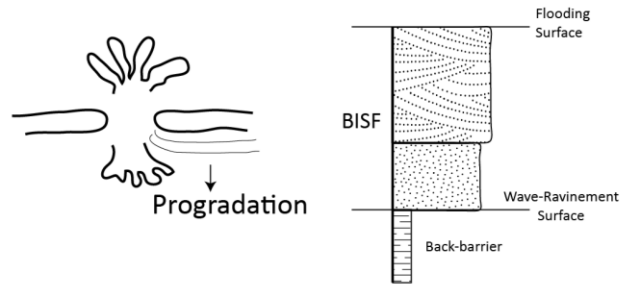


Backstepping

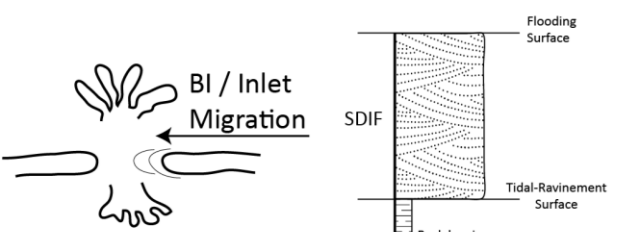


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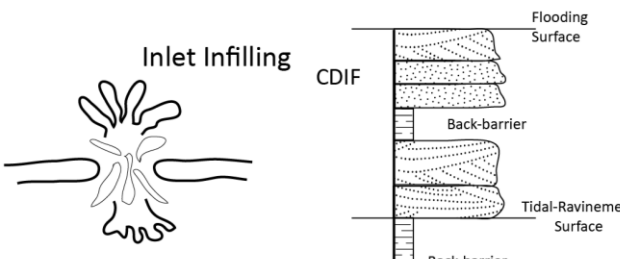
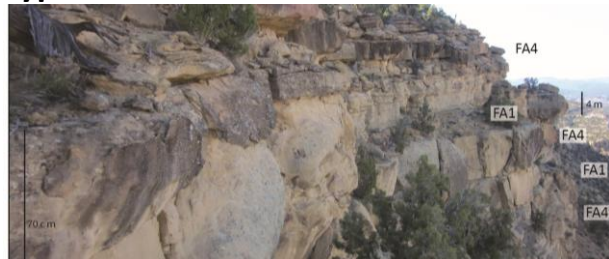
Type 1- Barrier Island Shoreface



Type 2- Shoreface-dominated Inlet Fill



Type 3- Channel-dominated Inlet Fill



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