## Writing on the mud: a Patagonian tale by sea pens and oysters

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Sea pens are anthozoans belonging to the Order Pennatulacea with a wide geographic distribution but with a scarce fossil record. They are the only octocorals adapted to live in soft sediments. Unlike other octocorals, they have an axial polyp that has a rigid, calcareous axis and a peduncle. On the other hand, oysters are stable islands of hard substrate in the otherwise unstable soft muddy environment of the sea bottom. Here I present a comparison between a recent shoreface environment recorded in Bahía San Blas (Buenos Aires Province) with a conspicuous population of sea pens and oyster reefs. Also very fine-grained silty sandstones within the lower part of the Chenque Formation (early Miocene) at Rada Tilly (Chubut Province) containing hundreds of sea pen rods and oysters reefs. The results indicate that although actualism may be in dispute it still holds true as the cornerstone of sedimentology and taphonomy.

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