

Effects of an Environmental Estrogen on Male Gulf Pipefish, *Syngnathus scovelli* (Evermann and Kendall), a Male Brooding Teleost

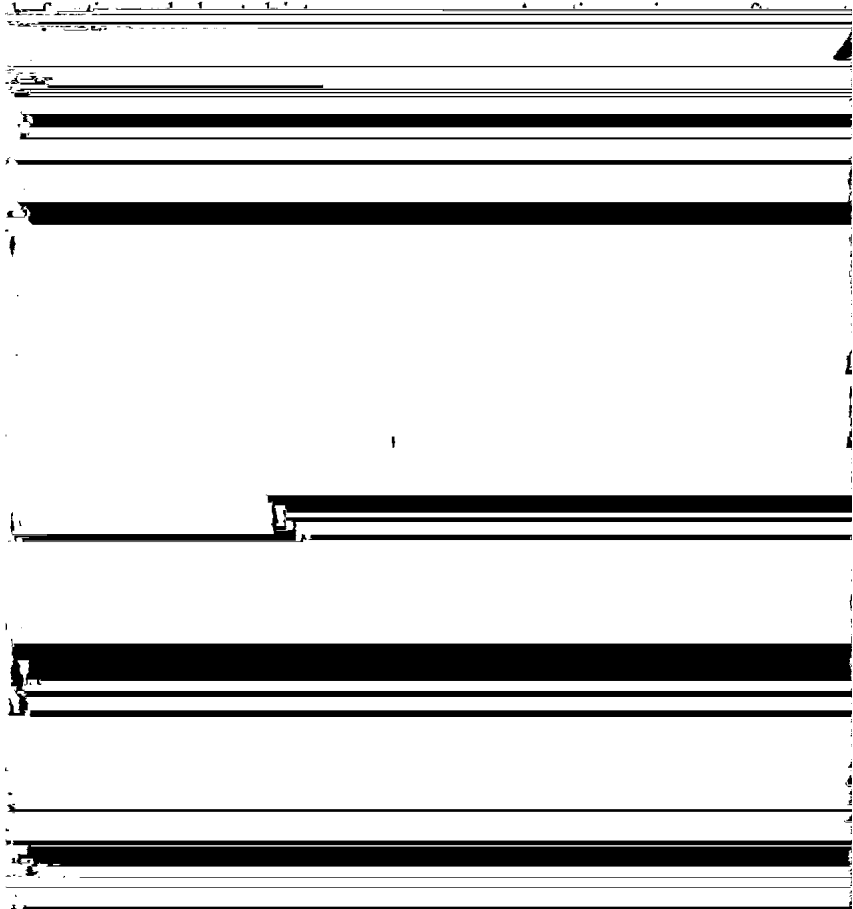
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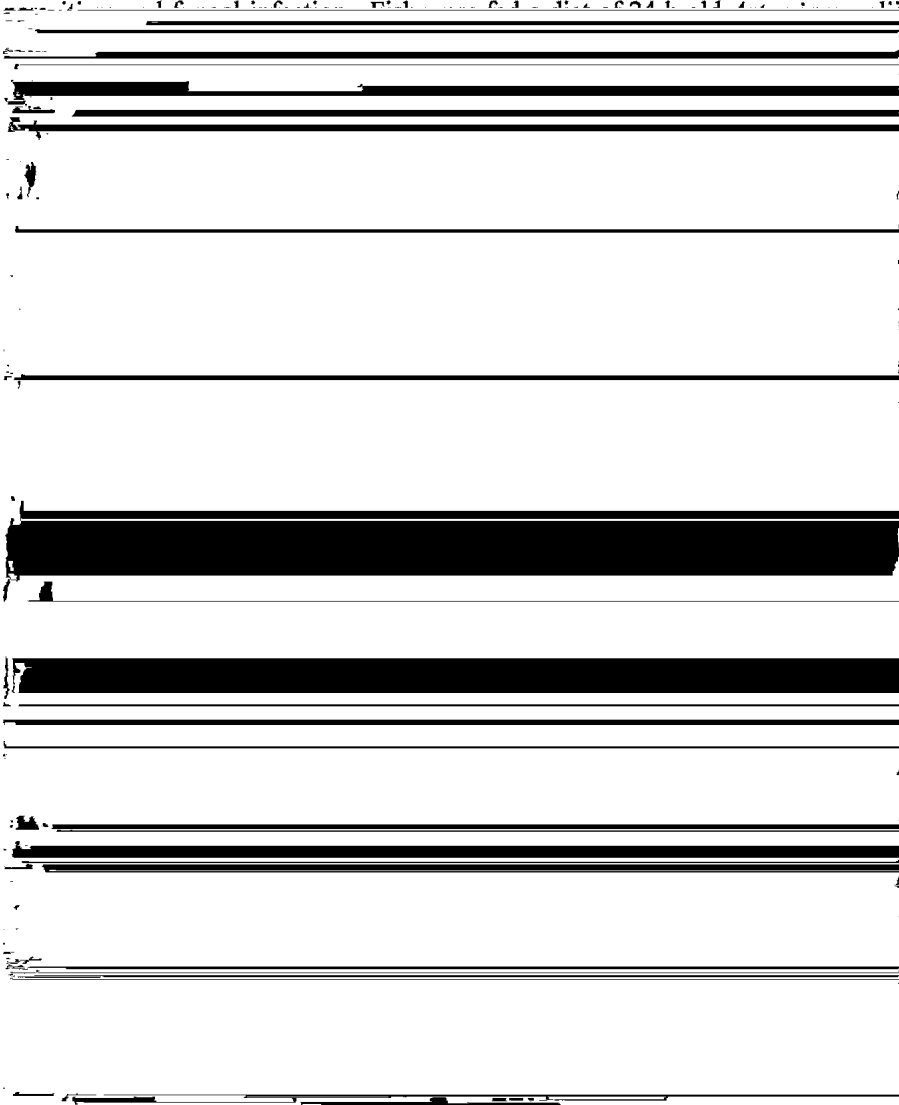
Environmental estrogens have been implicated in hormonal disruption in wildlife populations (McLachlan and Korach 1995). Reported effects include increased plasma levels of estrogen responsive proteins, testes atrophy, reproductive



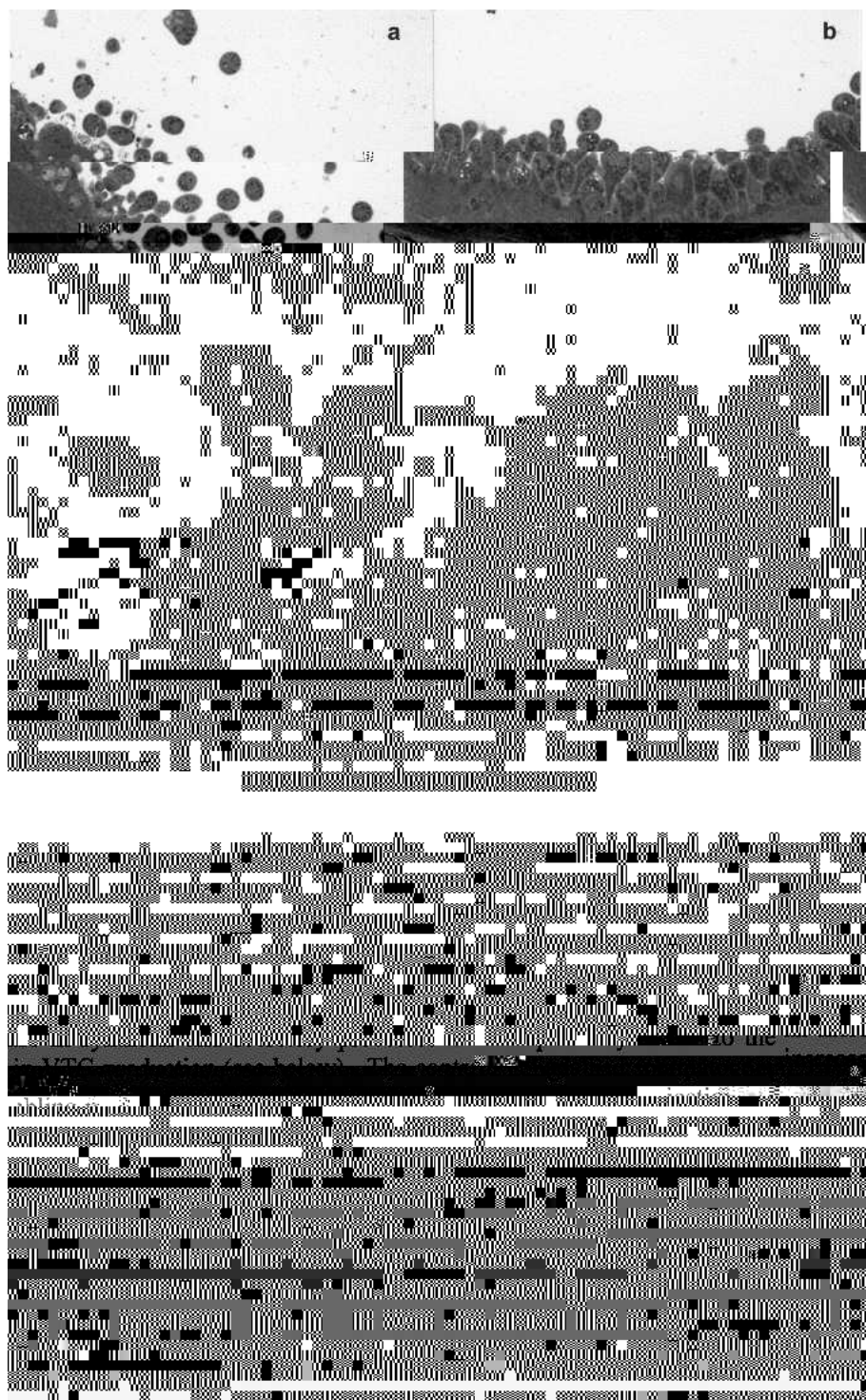
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pipefish were examined in a laboratory based experiment. EE2 was chosen as a model for environmental estrogens because of its relative stability. Fish were held in the laboratory for more than two weeks prior to exposure, housed in 40 L aquaria at temperatures of 25 - 28°C. Reverse osmosis water supplemented with 0.54 mM MgSO₄, 0.058 mM KCl, 0.44 mM CaSO₄ and 1.32 mM NaCO₃ in order to obtain an alkalinity of 65 mg/L and a hardness of 100 mg/L was used. The salinity was brought to 5 psu by the addition of 51.3 mM NaCl to decrease







males are lighter in color and lack the metallic banding (Jones and Ayres 1997)

Feminization of pigmentation pattern, including overall darkening and

Hemming JM, Allen HJ, Thueson KA, Turner PK, Waller WT, Lazorchak JM,
Jettier D, Chow M, Denslow N, Venables R (2004) Temporal and spatial

