

## Supplementary material

### **Reproductive ecology of the witch guitarfish *Zapteryx xyster* Jordan & Evermann, 1896 (Chondrichthyes: Trygonorrhinidae) in the Gulf of Tehuantepec, Mexican Pacific**

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**Table S1. Empiric scale of maturity proposed for witch guitarfish *Zapteryx xyster*, based on macroscopic observations of the reproductive system of both sexes**

Maturity stage	Males	Females
Juvenile	Thin white testicle, little blood irrigation. Flaccid epididymis. Clasper flaccid at the base.	Thin white ovary, little blood irrigation. Undifferentiated oocytes. No regionalisation between oviduct and uterus. Oviducal gland not well defined.
Sub-adult	Firm beige testicle, with apparent development but not sectioned. White epididymis, thin and long. Clasper partially calcified and rotation less than 360°.	Ovary has uniform appearance but no visible oocytes. The oviduct is differentiated and compact. The oviducal gland is not well differentiated.
Adult	Turgid testicle, with high blood irrigation and pink lobes clearly sectioned. Spiral epididymis, long and whitish. Cranial section of the siphonal sac is thin, becoming thick in the caudal region. Clasper is calcified at the base with 360° rotation, rhipiodon is open and with seminal fluid.	Both ovaries are functional, oocytes and oviducal gland are completely differentiated. Four variants: Non-pregnant female with large ovaries and notable blood irrigation, empty uteri. Pregnant female with small ovaries, uteri with encapsulated uterine eggs. Pregnant female with small ovaries and differentiated embryos in the uterus. Post-partum female with small ovaries and distended uteri.