

Use of ultrasound and hormonal values for pregnancy monitoring in bottlenose dolphin (*Tursiops truncatus*)

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Pregnancy can be diagnosed in bottlenose dolphins by using several methods: increased abdominal roundness, mammary gland development, straining and body flexion in late pregnancy, serum progesterone concentrations and recently ultrasonographic monitoring. This method has the advantages that it can identify abnormalities at an early stage and that regular measurements make it possible to monitor fetal growth and provide a more accurate prediction of expected delivery. In order to attempt an integrated approach to the study of *Tursiops truncatus* pregnancy we report hormonal, ultrasonographic and behavior observations in a female housed in Palablù dolphinarium of Gardaland (VR).

Plasmatic progesterone levels, obtained by monthly blood samples rise in first week after observed conception, stay high during the pregnancy and decrease in the last 4 months. Monthly ultrasonographic examination was performed in order to confirm pregnancy and to follow fetal development. The measurements concerned diameters of thorax and head, body length, structure of internal organs (liver, bladder and heart); fetal heart beat was registered too. Expected delivery date was predicted from ultrasonographic measurements with a mathematical growth model (Lacave et al., 2004) with an error of few days and the correct fetal presentation permitted an uncomplicated delivery.

Data obtained confirm the usefulness of a non invasive technique like ultrasonography for pregnancy diagnosis and fetal growth monitoring in *Tursiops truncatus*. Moreover this could be an excellent method to predict delivery date but more investigation is necessary.