

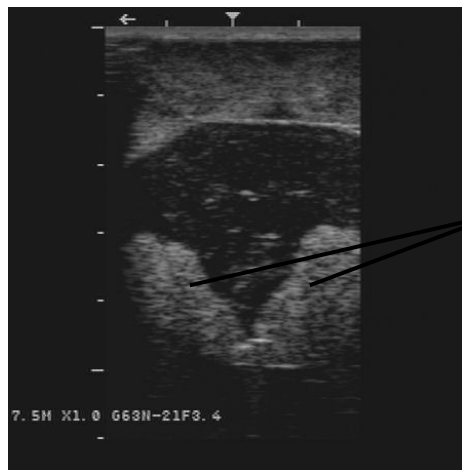
**PEEKING AT GONADS. THE USE OF ULTRASOUND TECHNOLOGY IN A THREATENED SNAKE RIVER SPRING CHINOOK SALMON *Oncorhynchus tshawytscha* CAPTIVE BROODSTOCK PROGRAM.**

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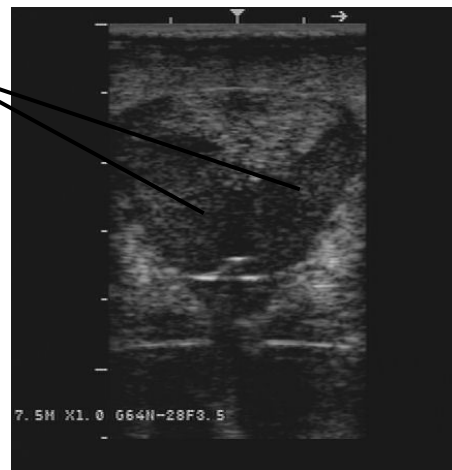
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Ultrasound imagery has long been used as a rapid non-invasive diagnostic tool in human medicine. Advances in technology have allowed its application to extend to other fields such as veterinary medicine and aquaculture. Ultrasound has become an essential tool in Pacific salmon captive broodstock programs when distinguishing the maturation status and sex of adults from juveniles of the same year class is virtually impossible from a phenotypic standpoint. The Snake River (Grande Ronde Basin) Spring Chinook Salmon Captive Broodstock Program has been utilizing ultrasound technology since 2002 to identify the level of maturation and sex of these ESA listed fish, months rather than weeks, in advance of spawning. This has greatly reduced the number of stressful handlings to which the fish are subjected and allowed maturing seawater reared fish to be transferred back to freshwater in concert with naturally returning Chinook. It also permits fish culturists and researchers to better plan for spawning and implement the use of spawning matrices to preserve the genetic diversity of the stocks. The intent of this presentation is to explain the basic principles and technology of ultrasound and show the practical uses and applications for fish culture.

**Female Chinook**



**Male Chinook**



testes

ovaries