

# BREEDING A WHITE CHEEKED GIBBON

CHEYENNE MOUNTAIN ZOO  
MALES PREFER BLONDES



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**B**reeding endangered species is often a balancing act between doing what's best for the species and what's best for the individual animal. When Cheyenne Mountain Zoo initially received the recommendation to breed our 29-year-old female white-cheeked gibbon named Debbie Gibbon, we were excited at the prospect of bringing a critically endangered baby gibbon into the world. However, Debbie Gibbon's advanced maternal age and history of complicated pregnancies made us pause. Despite getting pregnant with her mate, TamLin, multiple times, she had only given birth to one live offspring, which then had to be hand raised when her infant had some medical complications.

## BREEDING A WHITE CHEEKED GIBBON

We reviewed Debbie Gibbon's medical history and old X-rays with a human OBGYN, but there was no obvious underlying cause for her pregnancy complications. A physical exam under general anesthesia again revealed nothing. However, on ultrasound of her reproductive tract, the uterus appeared surprisingly thick and had an associated cyst. A fine needle aspirate of the cyst showed possible cancerous cells. This did not resolve the question as to why Debbie's prior pregnancies had been so complicated, but helped us make the decision to not breed her again.

We discussed different treatment options with the gibbon veterinary advisors. While saving her life was our top priority, we also wanted to ensure she continued to have a strong relationship with her mate. In this gibbon species, males have black hair and females are blondes. Another zoo spayed this species of gibbon and observed the female's hair became dark after the surgery. Unfortunately, in this species, it seems that males prefer blondes. We briefly considered whether bleaching Debbie Gibbon's roots might be an option to save her relationship if we did see a color change. A decision was made that if we could remove her uterus and leave behind her ovaries that would be best, but ultimately, it depended on how things looked surgically.

We scheduled an exploratory laparotomy with a team of

OBGYN surgeons. After anesthetizing her and confirming her i-STAT and Abaxis chemistry panels were still normal, the team started the exploratory laparotomy. The uterus was diffusely thick, but there was no obvious involvement with her ovaries or signs of metastasis. A hysterectomy was performed and the body wall was closed in 3 layers. In addition, we painted her fingernails purple and placed extra "dummy" sutures in random spots on her body, to distract her from picking at her abdominal incision. She spent the night in a large kennel to keep her from being overly active immediately after surgery. She was back on exhibit with TamLin the next morning. While she showed no obvious signs of pain, Debbie Gibbon continued pain medications for the next week, with pills handed to her in grapes.

Biopsy results showed that the uterus had an infiltrative leiomyoma, also known as fibroids. In humans, fibroids are associated with decreased fertility and sometimes with abdominal pain. Fortunately, this benign neoplasia is locally infiltrative in the uterus but does not metastasize. Uterine fibroids are also relatively common in Asian elephants. While we don't know whether Debbie Gibbon's fibroids caused her any discomfort, she may be more comfortable now that they are gone. She is back to swinging around her enclosure and spending time with TamLin. And, fortunately, she's still blonde.

### Work Up Day

Test type	Result
ALB (g/dL)	4.0
ALP (U/L)	89
ALT (U/L)	21
AMY (U/L)	230
TBILI (mg/dL)	0.4
BUN (mg/dL)	7
Ca (mg/dL)	8.8
PHOS (mg/dL)	4.3
CRE (mg/dL)	0.4
GLU (mg/dL)	123
Na (mmol/L)	136
K (mmol/L)	5.3
TP (g/dL)	6.4
GLOB (g/dL)	2.4

### Surgery Day

Test type	Result
ALB (g/dL)	3.9
ALP (U/L)	137
ALT (U/L)	27
AMY (U/L)	203
TBILI (mg/dL)	0.3
BUN (mg/dL)	5
Ca (mg/dL)	9.1
PHOS (mg/dL)	2.5
CRE (mg/dL)	0.7
GLU (mg/dL)	118
Na (mmol/L)	139
K (mmol/L)	6.1
TP (g/dL)	6.0
GLOB (g/dL)	2.2