

PROGRESS ON AMP GOAL 3:

TAXA OF MANAGEMENT CONCERN IN THE COLORADO RIVER ECOSYSTEM

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- **Taxon list and priority designation**
- **Status of population rehabilitation/
restoration**
- **A draft motion to AMWG re: SMC**

BIODIVERSITY IN THE CRE

- **~ 800 plant taxa**
- **~ 10,000 invertebrate taxa**
- **~ 350 vertebrate taxa**
- **Present AMP focus on HBC, KAS, SWFL**
- **>90 CRE taxa missing, at-risk, or status-unknown**

Update on population rehabilitation/restoration

AMP GOAL 3: *Restore populations of extirpated species, as feasible and advisable.*

The IN for Goal 3 is RIN 3.1.1:

What information (including technical, legal, economic, and policy issues) should be considered in determining the feasibility and advisability of restoring pikeminnow, bonytail, roundtail chub, river otter, or other extirpated species?

AMWG April 2009:

In recognition of GCDAMP goals toward management of the Colorado River through an ecosystem approach, AMWG directs the TWG to establish the Species of Concern Ad Hoc Committee (SMCAHC) and requests the participation of GCMRC in that ad hoc committee, to produce a draft report to be presented to AMWG on or before by May 1, 2011, that contains the following with regard to species of management concern in the CRE: A review of information about an assessment of the status of habitat needs and availability, and ecosystem roles of the species.

(NOTE: Extension granted to August 2011 AMWG meeting)

The Goal 3 SMC Report:

The Goal 3 Species of Management Concern report was presented to and unanimously received by AMWG on 24 August 2011. No further action has been taken since delivery of the report.

LIST OF SMC in the CRE

Plantae various	Eumops perotis californicus	Onychomys leucogaster
Erigeron utahensis	Brechmorhoga pertinax	Gila robusta
Parryella filifolia	Euderma maculatum	Gila elegans
Meleagris gallopavo	Anseriformes, aquatic Neoaves	Spilogale gracilis
Equus asinus	Anaxyrus (Bufo) woodhousii	Taxidea taxus
Castor canadensis	Myotis occultus	Heloderma suspectum cinctum
Metriocnemus stevensi	Myotis ciliolabrum	Cathartes aura
Ondatra zibethicus	Parastrellus hesperus	Falco peregrinus anatum
Callipepla gambelii	Myotis volans	Ursus americanus
Limenitis archippus obsoleta	Myotis evotis	Puma concolor
Rheithrodontomys m. megalotis	Idionycteris phyllotis hualapaiensis	Aquila chrysaetos
Ovis canadensis nelsoni	Myotis thysanodes	Lontra canadensis sonora
Simulium 4 spp.	Lithobates (Rana) pipiens	Lynx rufus
Pelecanus occidentalis	Belostoma nr. flumineum	Canis lupus population 1
Charadrius montanus	Myotis yumanensis	Haliaeetus leucocephalus
Cicindela hirticollis coloradula	Insecta riparian various	Falco mexicanus
Anaxyrus (Bufo) punctatus	Lithobates (Rana) nr. yavapaiensis	Celtis laevigata var. reticulata
Cicindela haemorrhagica arizonae	Callisaurus draconoides	Populus fremontii
Lasiurus blossevillei	Strix occidentalis lucida	Prosopis glandulosa var. torreyana
Nyctinomops macrotis	Bassariscus astutus	Salix gooddingii
Leucochloridium cyanocittae	Canis latrans	Oxyloma haydeni kanabensis
Micracanthia quadrimaculata	Mephitis mephitis	Xyrauchen texanus
Chrysemys picta bellii	Procyon lotor	Catostomus discobolus
Actitis macularia, other non-listed Charadriiformes	Urocyon cinereoargenteus	Catostomus latipennis
Taderida braziliensis	Megaceryle alcyon	Emidonax trailii extimus
Antrozous pallidus	Ardea herodias, Ciconiiformes	Rhinichthys osculus
Corynorhinus townsendii	Geococcyx californianus	Gila cypha
Peromyscus maniculatus	Leptotyphlops humilis, other rare snakes	Gymnogyps californianus
Coccyzus americanus	Crotalus oreganus abyssus	Ptychocheilus lucius
Myotis californicus	Pandion haliaetus	

SPECIES CONSIDERED BY THE GOAL 3 AD HOC THAT WARRANT MANAGEMENT ATTENTION

Scientific Name	Listing Rank	Nature Serve Rank	Policy Rank	Multicriteria Rank	Trophic Rank	Standardized Policy Ranks Sum
<i>Celtis laevigata</i> var. <i>reticulata</i>	2	3	16	56	4	0.216
<i>Populus fremontii</i>	11	12	18	68	5	0.306
<i>Prosopis glandulosa</i> var. <i>torreyana</i>	13	14	19	82	6	0.360
<i>Salix gooddingii</i>	15	34	23	85	7	0.441
<i>Oxyloma haydeni kanabensis</i>	76	80	63	76	16	0.829
<i>Xyrauchen texanus</i>	86	86	86	79	17	0.947
<i>Catostomus discobolus</i>	43	71	73	88	19	0.772
<i>Catostomus latipennis</i>	44	72	74	89	20	0.784
<i>Emidonax trailii extimus</i>	84	84	89	75	53	0.933
<i>Rhinichthys osculus</i>	40	51	72	87	58	0.702
<i>Gila cypha</i>	78	82	84	84	77	0.921
<i>Gymnogyps californianus</i>	82	83	64	47	82	0.775
<i>Ptychocheilus lucius</i>	85	85	85	74	89	0.924

Note: Several other SMC (e.g., ZTL) scored higher than HBC, but were not Uniformly agreed upon by the overall committee as warranting management attention.

Goodding's Willow (*Salix gooddingii*)



Once relatively common along wide reaches of the CRE, but now extirpated from 7 of 18 post-dam sites. Most remaining plants in poor health, and no recruitment; losses due to increased beaver attack and recruitment impacts due to flow impacts on flood frequency, duration, and grain size.



Tamarisk Leaf Beetle (Chrysomelidae: *Rhabdophaga* sp.)



**Tamarisk defoliation throughout the CRE
Consequences?**

Lees Ferry



A



B



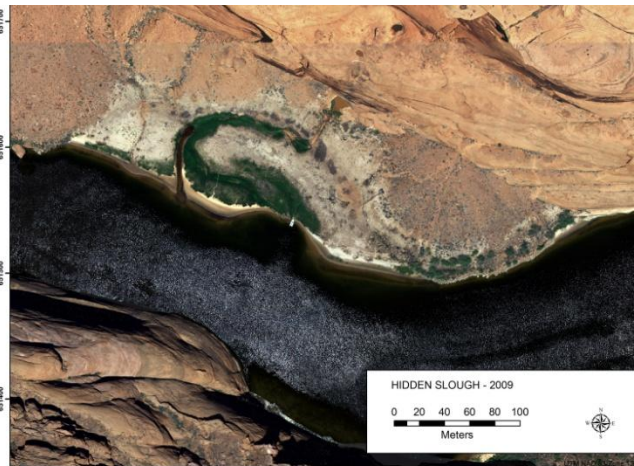
C

Hidden Slough (-6.5R)



HIDDEN SLOUGH - 2005

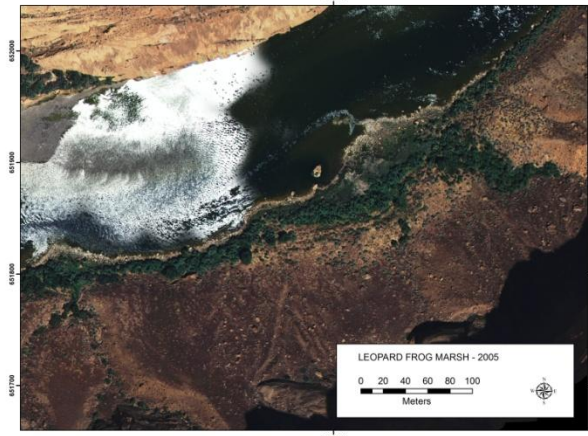
0 20 40 60 80 100
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HIDDEN SLOUGH - 2009

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Leopard Frog Marsh (-9L)



LEOPARD FROG MARSH - 2005

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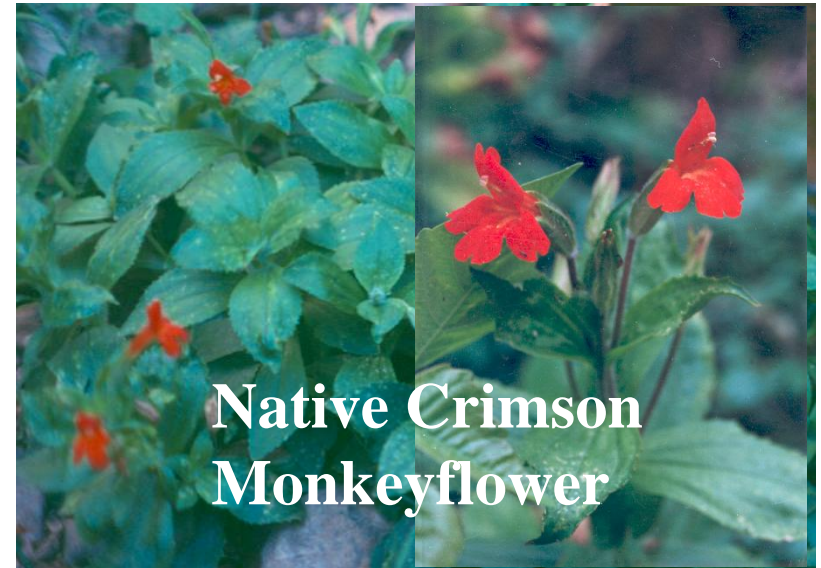
Possible restoration site for
northern leopard frogs



Riparian Habitat Rehabilitation in Glen Canyon

Revegetation at 2 sites has involved irrigation
Requires fencing of all planted trees

A SNAIL TAXONOMY PUBLICATION STILL NEEDED



Endangered Humpback Chub
(Cyprinidae: *Gila cypha*)



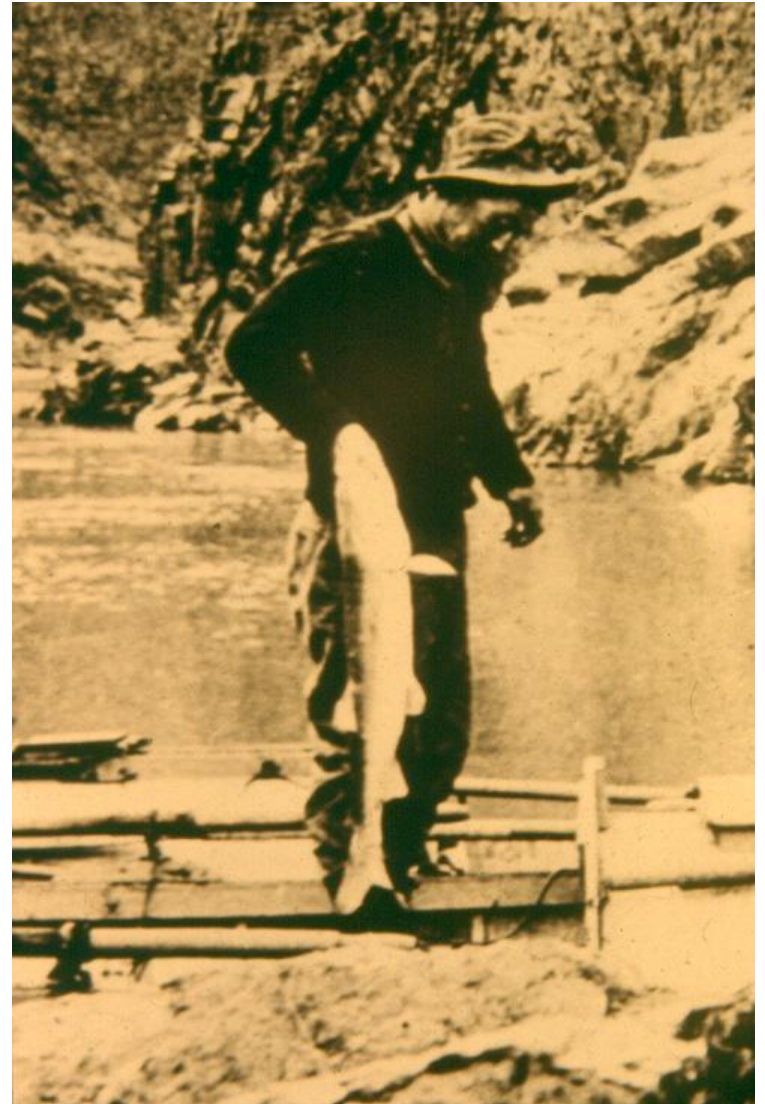
OTHER FISH SPECIES EXTIRPATED FROM THE CRE



Bonytail Chub



Razorback Sucker



Colorado Pikeminnow

Zebra-tailed Lizard (*Callisaurus draconoides*)





Southwestern Willow Flycatcher

- An umbrella species for ~ 24 nesting neotropical migrant bird species in the CRE
- Extirpated from historic range
- BH Cowbird brood parasitism
- Commonly nest in non-native tamarisk, a habitat now much Reduced in area



Bald Eagle

- Wintering in CRE mostly upstream from LCR
- Feed on trout
- Feeding aided by fluctuating flows
- Easily disturbed by passing boats



Peregrine Falcon

- Large breeding population
- 90 % of prey biomass=waterbirds, mostly related to post-dam clearwater flow



California Condor

- Reintroduced into Grand Canyon region
- Now commonly observed in the CRE

MISSING MAMMALS



**Colorado River Otter
Extinct? Role as mammalian
fish predator**

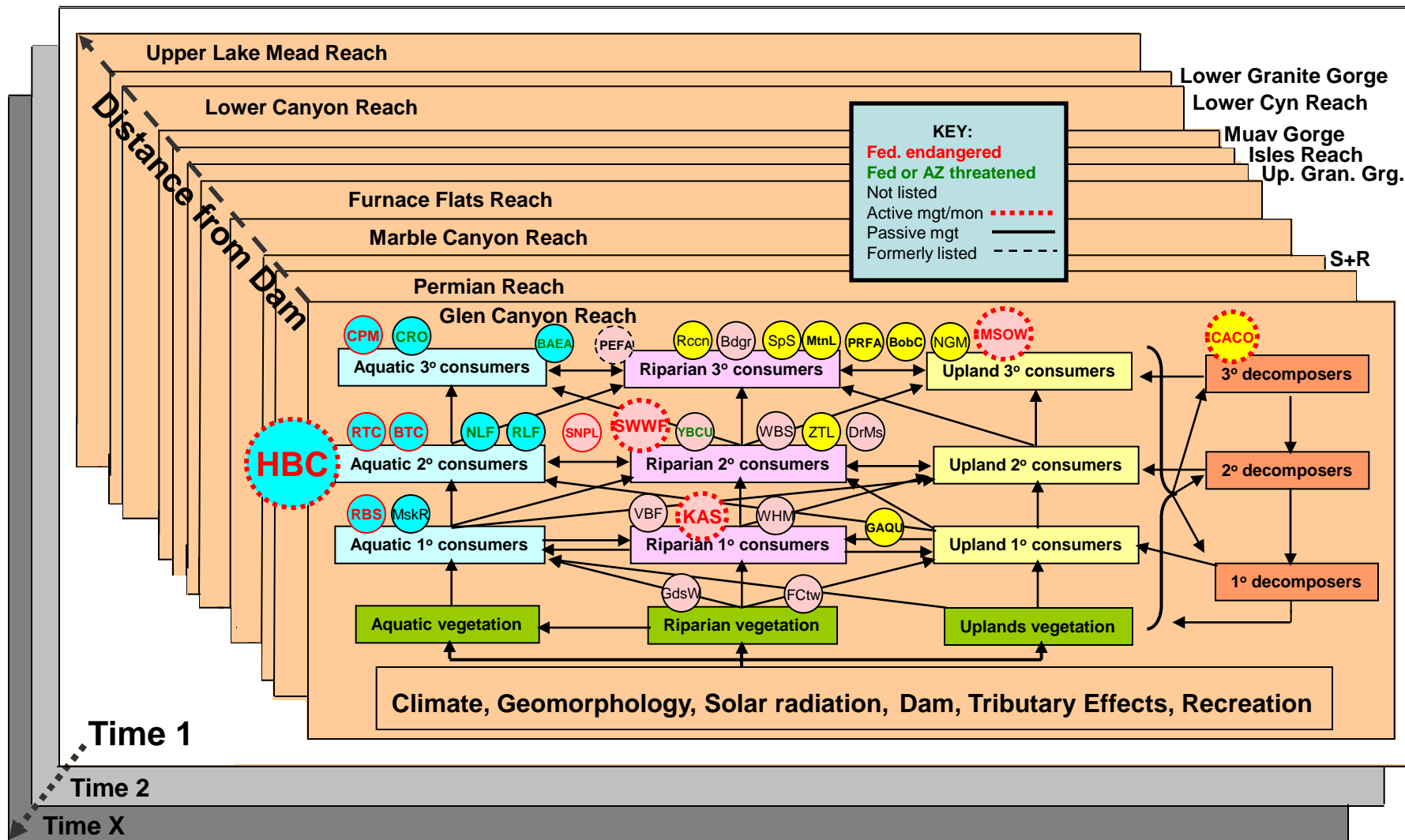


Badger

Muskrat: status in CRE – occasional?



SIMPLIFIED CONCEPTUAL MODEL OF THE COLORADO RIVER ECOSYSTEM, SHOWING THE TROPHIC POSITION OF EXTIRPATED AND LISTED FAUNA



Employing an ecosystem approach in the AMP requires understanding the status and changing distribution of ecologically and administratively influential species

- Periodically evaluate extent of knowledge and administrative implications
- Also address information gaps, reintroduction strategies
- Continue to discuss responsibilities, funding and implementation strategies

PROPOSED TEXT FOR MOTION TO AMWG:

In relation to Goal 3, TWG recommends that AMWG establish a Species of Management Concern Ad Hoc Committee to integrate and regularly present Information on native and non-native species that influence CRE structure, function, and management decision-making.

(NOTE – THIS MOTION WAS WITHDRAWN AFTER PRESENTATION OF THIS PRESENTATION, WITH THE UNDERSTANDING THAT TWG WILL CONTINUE DISCUSSION OF GOAL 3 ISSUES AND WILL REPORT THE RESULTS OF THOSE DELIBERATIONS TO AMWG)