



**AMP GOAL 3:
EXTIRPATED OR AT-RISK SPECIES
IN THE COLORADO RIVER ECOSYSTEM
DOWNSTREAM FROM GLEN CANYON DAM**

**Larry Stevens
Grand Canyon Wildlands Council, Inc.**

AMP GOAL 3:

***Restore populations of extirpated species,
as feasible and advisable.***

The only 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?

Employing an ecosystem approach to CRE management involves understanding the distribution, status, and potential for restoration of extirpated, ecologically important species

BIODIVERSITY IN THE CRE

- **~ 800 plant species**
- **~ 10,000 invertebrate species**
- **~ 400 vertebrate species**

EXTIRPATED OR DECLINING SPECIES

- **Which species have been lost or are declining in post-dam time; why ?**
- **Which missing species were ecologically important ?**
- **Is there potential for restoring missing populations ?**

Goodding's Willow (*Salix gooddingii*)



Once relatively common in wide reaches of the Colorado River in Grand Canyon; now gone or non-reproductive from 14 of 21 sites, most plants in poor health and no recruitment. Losses due to increased beaver attack and erosion, or recruitment limitations due to flow alteration.

**SMALL, ENDEMIC INVERTEBRATE POPULATIONS,
NO MONITORING, STATUS UNCERTAIN**



**Masked Clubskimmer
(LIBELLULIDAE: *Brechmorhoga pertinax*)
Stone Creek to Nankoweap Creek**



**Wetsalts and Hairy-Necked
Tiger Beetles (CICINDELIDAE)**

Extirpated from GC?



**Southwestern Viceroy Butterfly
(NYMPHALIDAE: *Limenitis archippus*)**

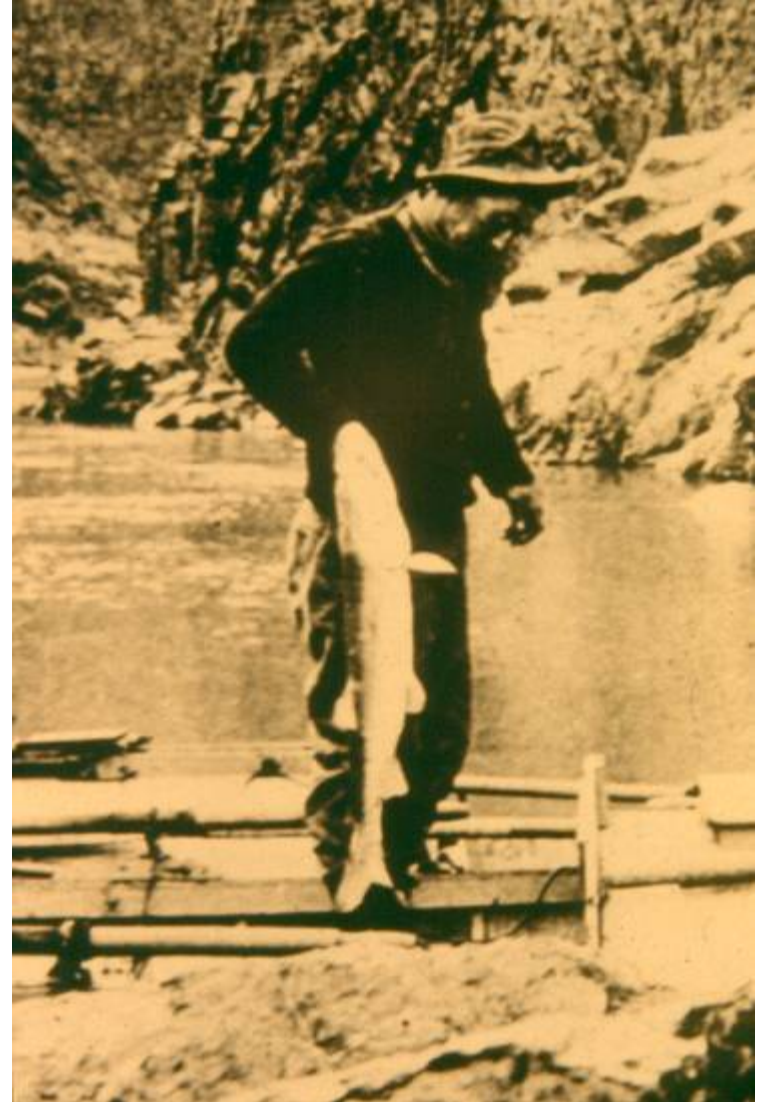
FISH SPECIES MISSING FROM GRAND CANYON



Bonytail Chub



Razorback Sucker



Colorado Pikeminnow

Other Species of Management Concern



MISSING? CRE MAMMALS



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

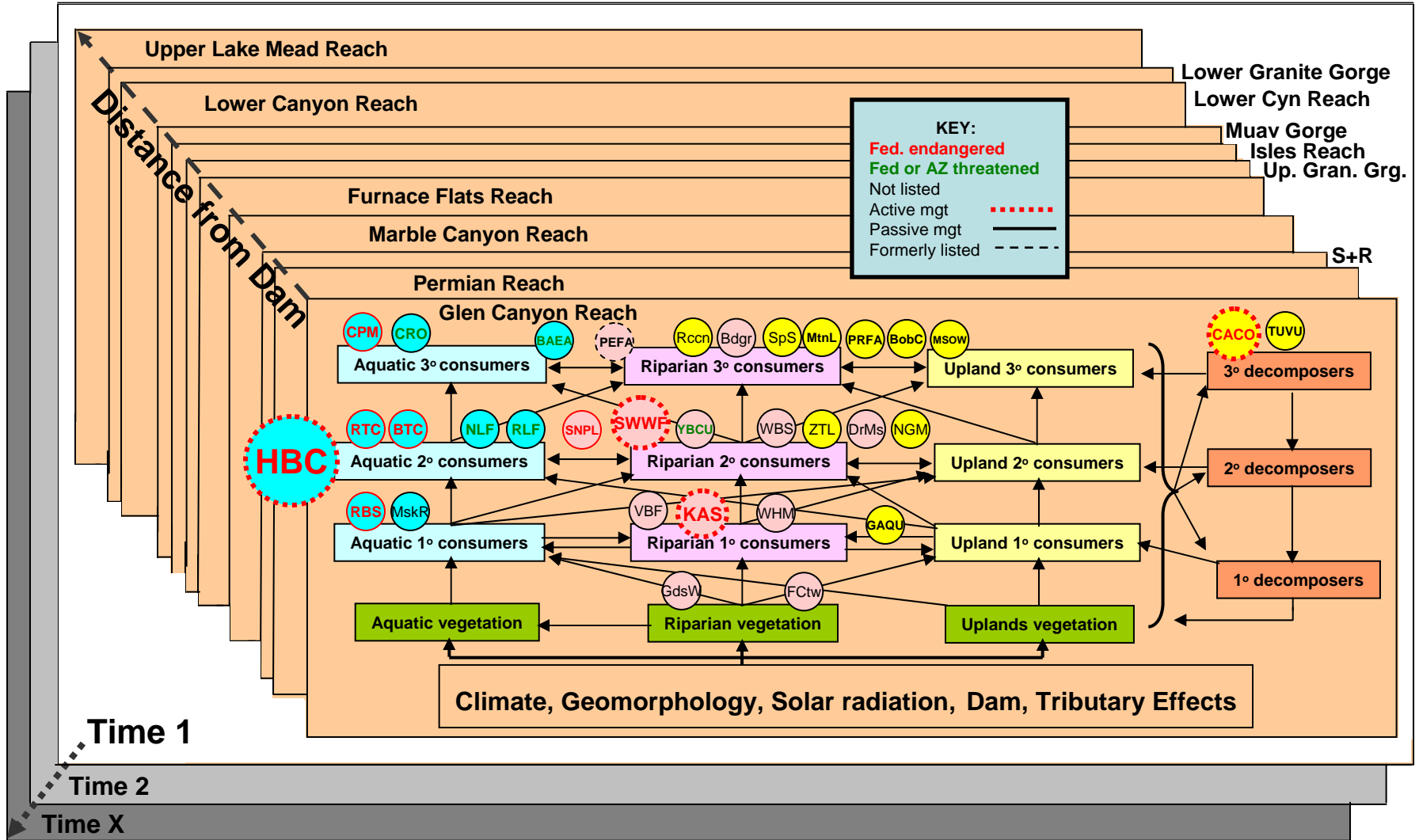


Badger – known from lower Glen Canyon

Muskrat: status in CRE?



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



GOAL 3 DRAFT REPORT FRAMEWORK:

- * Evaluate extirpated species, habitat needs, extent and quality of data**
- * Develop a prioritization process to assess relevance to AMP and potential for restoration**
- * Technical, legal, economic, and policy issues**
 - Prioritization**
 - Information gaps**
 - Responsibilities**
 - Compliance issues**
 - Funding**

Reporting Process:

- * Ad Hoc report to be presented to TWG → AMWG***
- * SA review***
- * Refinement***
- * Finalized for/by AMWG → SOTI***

MOTION: EXTIRPATED SPECIES IN CRE

In recognition of GCDAMP Goal 3 and towards management of the Colorado River through an ecosystem approach, AMWG directs the TWG to establish the Species of Concern (SMC) Ad Hoc Committee, co-led by Grand Canyon Wildlands Council, NPS, and FWS, to produce a report by May 1, 2011 that contains the following with regard to extirpated species and other species of management concern in the CRE:

A review of information about and assessment of the status, habitat needs, and ecosystem roles of the species, and

Recommendations on options and costs for improving stewardship of the species, including the potential for re-establishment / reintroduction.

AMWG requests the participation of GCMRC in this SMC Ad Hoc Committee.

In recognition of GCDAMP Goal 3, and towards management of the Colorado River through the Grand Canyon, the Ad Hoc Committee requests the participation of Grand Canyon Wildlands Council, Grand Canyon National Park, and the Grand Canyon Trust, to be presented to AMWG by May 1, 2011 that contains the following with regard to species of concern: current status of, habitat needs and availability, and ecosystem roles of the species.