

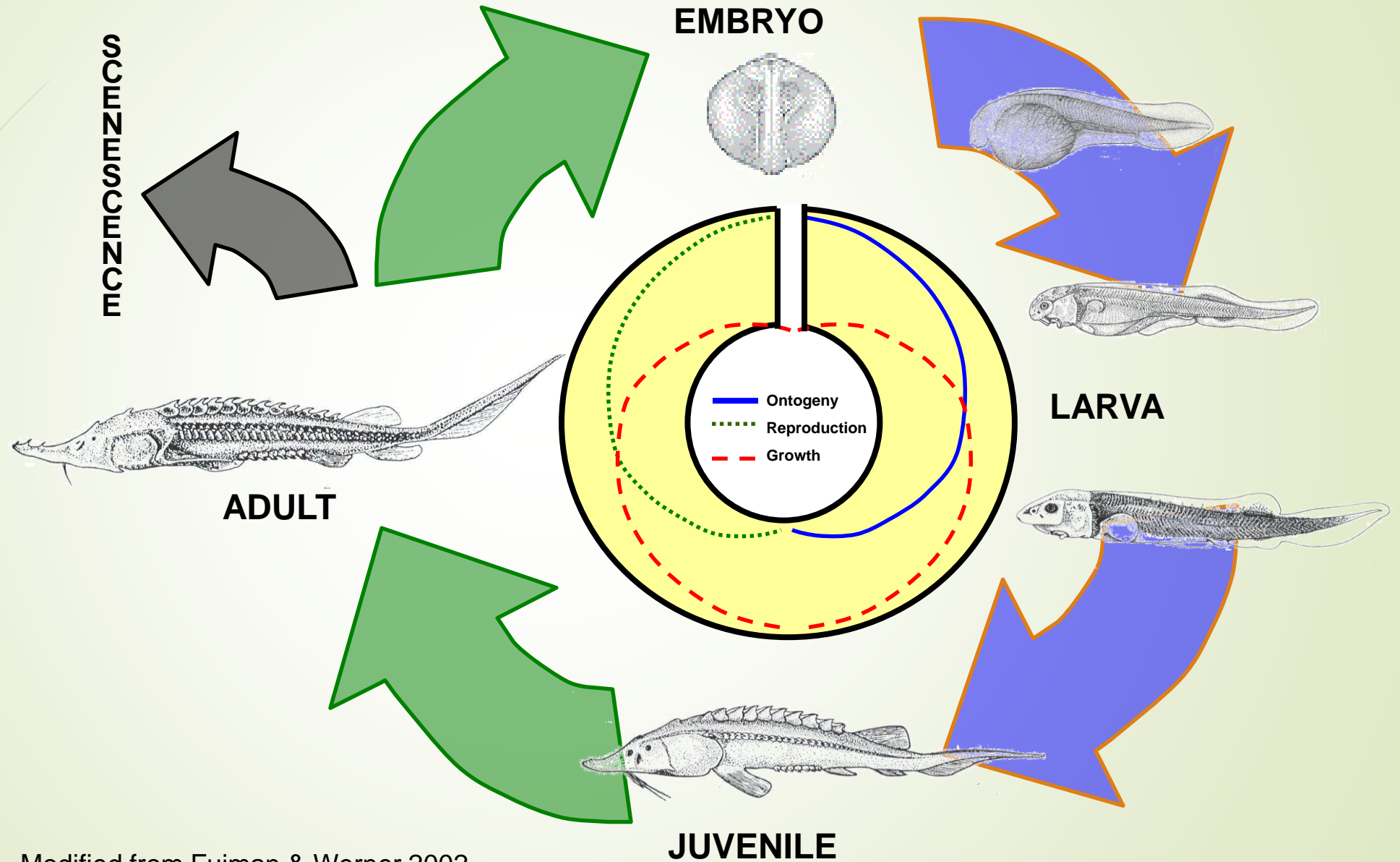
ISAC Perspective on Pallids in the Platte

14 September 2016, GC Meeting, Kearney, NE

PowerPoint
reviewed and
approved by all
ISAC members



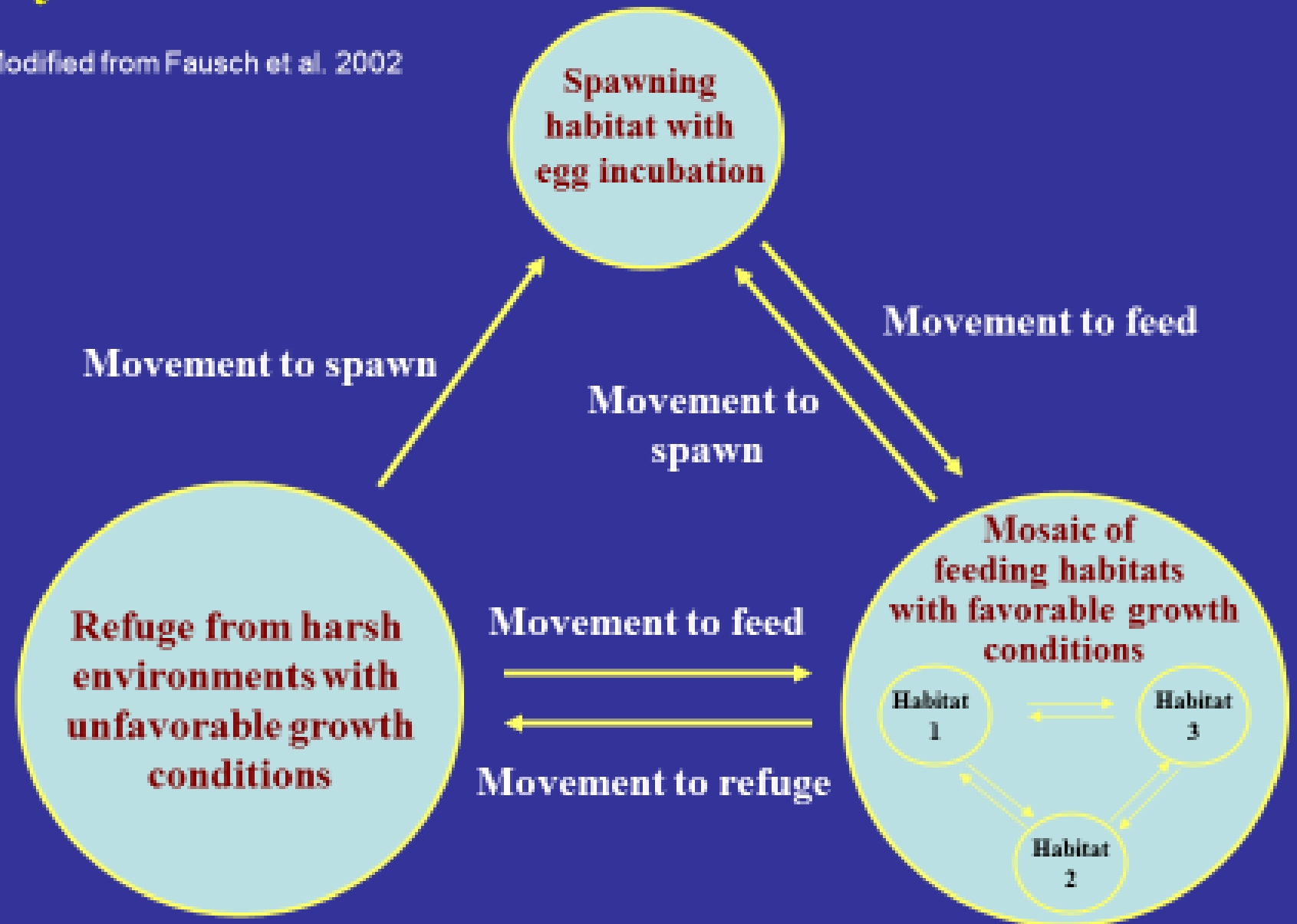
FISH LIFE-HISTORY STAGES



Modified from Fuiman & Werner 2002

Dynamic Model of How Riverine Fishes Allocate Time

Modified from Fausch et al. 2002



Habitat-use Matrix for Fishes

pallid sturgeon (*Scaphirhynchus albus*)

Life Stage	Activity		
	Spawning & egg incubation	Feeding & growth	Over wintering
Egg	CH,TR adhesive	NA	NA
Larvae	NA	CH?,CB,TR drift, settle	NA
Juvenile	NA	CB?,TR? benthic, eats invertebrates	CH?, TR?
Adult	CH,TR spawns on rock/gravel at ~16-19 °C	CH,CB,TR sandy bottoms, eats fish	CH, TR? deep pools

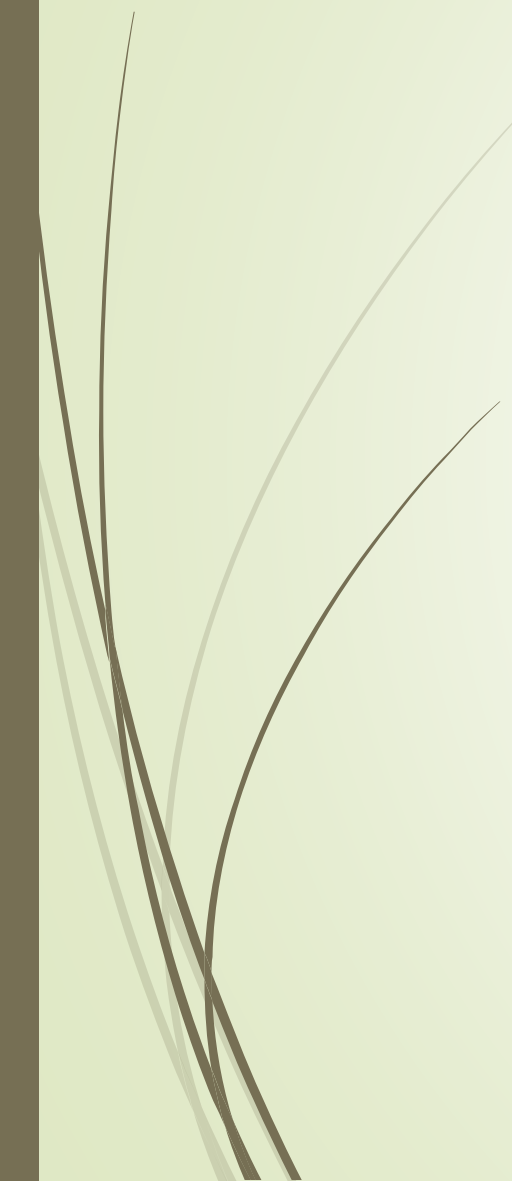
CH: main, secondary channel
 CB: channel border
 TR: tributary
 NA = not applicable


Source:
 Galat & Zweimüller 2001



Pallid Sturgeon Background & Future Activities Memorandum,
31 August 2016

ISAC Supports

- Retaining one-thumb-up status for Big Question 9
 - Program's proposed step-wise approach for moving forward
 - FWS questions as initial guidance for internal workshop
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ISAC Guidance (Meetings)

Step 1 – Internal PPRIP Workshop

- Success requires plenty of structure and focus
- Realign Program's goals and objectives with current understanding of pallid ecology
 - consider revising Program goal to reflect benefiting pallid *population*, rather than *habitat* surrogate.
- Don't lose sight of Program's limits of influence: “...*relative to Program water management...*”
- Update Program's pallid CEM before (and after) workshop
 - maintain current processes > response > indicators format
 - Include pallid life-stages, activities and time
 - Identify linkages Program can influence from those it should not or cannot



ISAC Guidance (Meetings), cont.

Step 1 – Internal PPRIP Workshop

- Consider inviting 1-2 pallid outside experts to help with “*understanding pallid sturgeon ecology...*”
- Agree on definitions for key terms: *benefit, adverse impacts, habitat, life-history stages of interest* in preparation for Expert Workshop (Step 2)
- Refine/revise FWS questions into Program questions, hypotheses & priorities for Expert Workshop (Step 2)
 - Can any Program water management action be *plausibly* linked with effects on pallids (positive or negative) based on current scientific understanding?
- Seek GC approval of revised Program goals and objectives as necessary for Step 2



ISAC Guidance (Meetings)

Step 2 – Expert Workshop

- Have Program policies and responsibilities consistent before workshop
- Submit revised Program questions, hypotheses and priorities before workshop
- Produce a consensus Program working hypothesis to guide Step 4
 - e.g., working H: *Releases of Program water to meet target flows will not harm/benefit pallid sturgeon populations in the lower Platte River*



ISAC Guidance (Meetings), cont.

Step 2 – Expert Workshop


- Identify decisions Program will likely have to make relative to ‘avoiding adverse impacts’ and beneficial releases of water for pallids
- Outline studies, performance measures, and decision criteria to answer questions/hypotheses and aid decision making
- Identify uncertainties, including confidence criteria for decisions



ISAC Guidance (Research)

Step 3 – Expanded/Enhanced Stage Change Study

- Supports expanded/enhanced stage-change study benefitting from previous ISAC, FWS and reviewers recommendations
- Goals and scope to be refined after Steps 1 & 2
- Model accuracy in detecting flow effects on downstream 'habitat' is likely to remain similar to previous study



ISAC Guidance (Research)

Step 4 – Focused Habitat Selection Research

- Goals and scope to be refined after Steps 1-3
- Consider revising emphasis to how Program water management affects pallid *populations* instead of 'habitat'
 - e.g., working H: *Releases of Program water to meet target flows will not harm/benefit pallid sturgeon populations in the lower Platte River*
- If sole-source, recommend/require an advisory group of outside pallid experts
- Studies should be closely coordinated with Missouri River studies (use consistent methods)

QUESTIONS?

