Birds as Indicators of Riparian Health and Function

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Indicator Species – a species or group of species whose function, population, or status can reveal the qualitative status of the environment

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- Represent attributes important to entire ecosystem

- Habitat needs can be used to guide conservation planning

- Monitor to measure progress toward restoration goals

Why are birds such useful indicators?

- Important ecological functions
- Well understood habitat associations
- Responsive to environmental change
- Easy to observe
- Standardized monitoring protocols

Partners in Flight

- Region–specific bird conservation plans
- Focal species approach to support conservation planning and management
- Focal species selected to
  - Represent desired future conditions
  - Be cost effective to monitor
  - Responsive to management actions

CONSERVATION STRATEGY FOR LANDBIRDS IN LOWLANDS AND VALLEYS OF WESTERN OREGON AND WASHINGTON

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Floodplain Forest Indicators

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Riparian shrub indicator species respond to restoration of native shrubs

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What can birds tell us about habitat for fish?

Photo credit: OR Parks and Rec Dept.

Linkages between processes, habitat attributes and avian indicator species

Riparian Ecosystem Processes	Riparian Habitat Attribute	Avian Indicator Species
Bank stabilization, shading, nutrient input, structure for channel	Dense Large canopy trees in woodland	Red-eyed vireo
	Scattered Large canopy trees in woodland	Bullock's oriole
Erosion and runoff control, nutrient input, filter sediment	Dense shrubs, open canopy	Willow flycatcher Yellow-breasted chat
Maintenance of floodplain processes	Large patches of structurally diverse woodland	Yellow-billed cuckoo Red-shouldered hawk

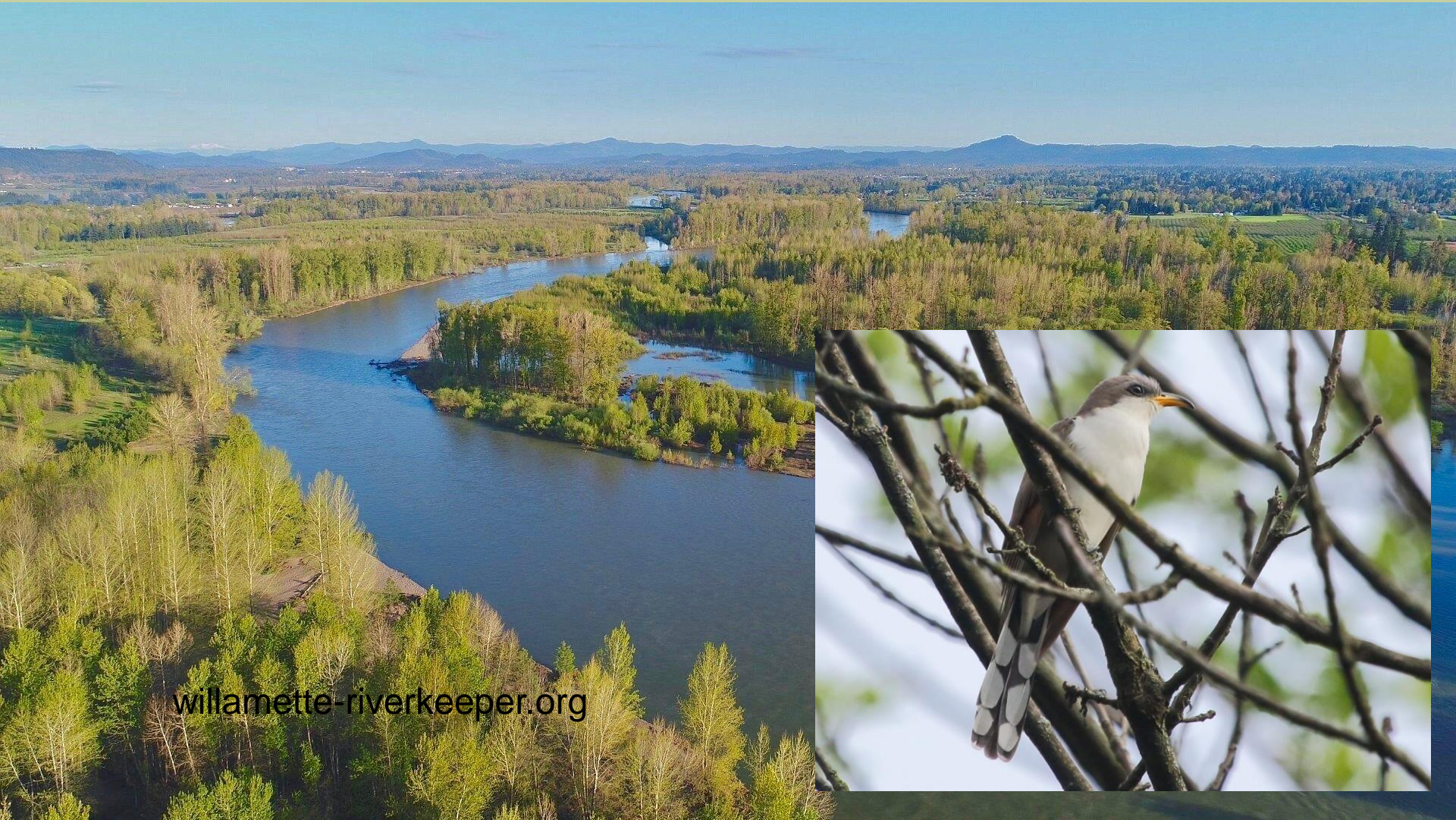# Suite of focal species together indicate healthy, functioning system

Focal Species are "Common" Species

- Robust monitoring data
- Avoids protected status regulations

Photo source: allaboutbirds.org

Special Status Indicator: Yellow-billed Cuckoo

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Cultural and Economic Importance of Birds

Raise conservation awareness

Promote public investment in stewardship

Thank you!

Matt Lee