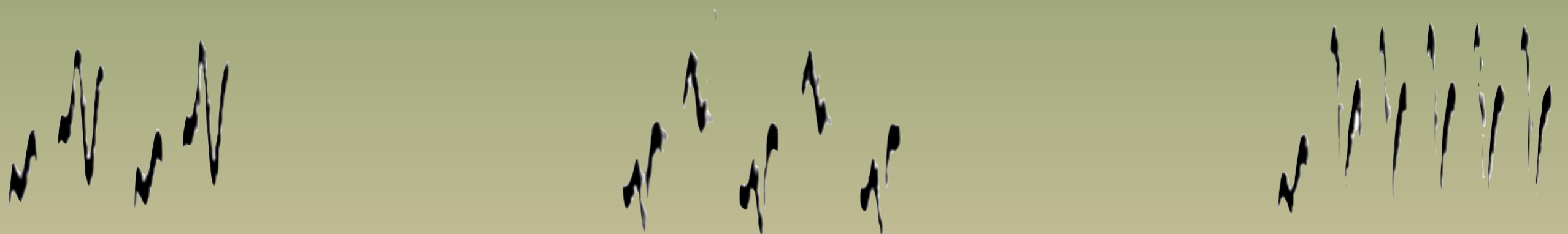


Identification of *Phylloscopus* & *Seicercus* warblers in China

Per Alström

Key Laboratory of Zoological Systematics and Evolution,
Institute of Zoology, Chinese Academy of Sciences, Beijing
and

Swedish Species Information Centre, Swedish University of
Agricultural Sciences, Uppsala, Sweden



Taxonomic history

Cheng Tso-hsin (1987): 24 species

Dickinson (2003): 43 species

Zheng Guangmei (2011): 45 species

Gill & Donsker (2012): 51 species

Taxonomic history

New species:

- Hainan Leaf Warbler *Phylloscopus hainanus* Olsson, Alström & Colston, 1993
- Alström's Warbler *Seicercus soror* Alström & Olsson, 1999
- Martens's Warbler *Seicercus omeiensis* Martens, Sun & Päckert, 1999
- Emei Leaf Warbler *Phylloscopus emeiensis* Alström & Olsson, 1995
- Alpine Leaf Warbler *Phylloscopus occisinensis* Martens, Sun & Päckert, 2008
- Limestone Leaf Warbler *Phylloscopus calciatilis* Alström, Davidson, Duckworth, Eames, Le, Nguyen, Olsson, Robson & Timmins, 2009

Taxonomic history

Taxonomic “splits” – 19 “new” species:

- Arctic Warbler *Phylloscopus borealis* 1 → 3 species
- Blyth’s Leaf Warbler *Phylloscopus reguloides* 1 → 3 species
- Greenish Warbler *Phylloscopus trochiloides* 1 → 2 species
- Pale-legged Leaf Warbler *Phylloscopus tenellipes* 1 → 2 species
- Pallas’s Leaf Warbler *Phylloscopus proregulus* 1 → 5 species
- Tickell’s Leaf Warbler *Phylloscopus affinis* 1 → 3 species (1 new)
- Yellow-browed Warbler *Phylloscopus inornatus* 1 → 2 species
- White-tailed Leaf Warbler *Phylloscopus davisoni* 1 → 2 species
- Golden-spectacled Warbler *Seicercus burkii* 1 → 6 species

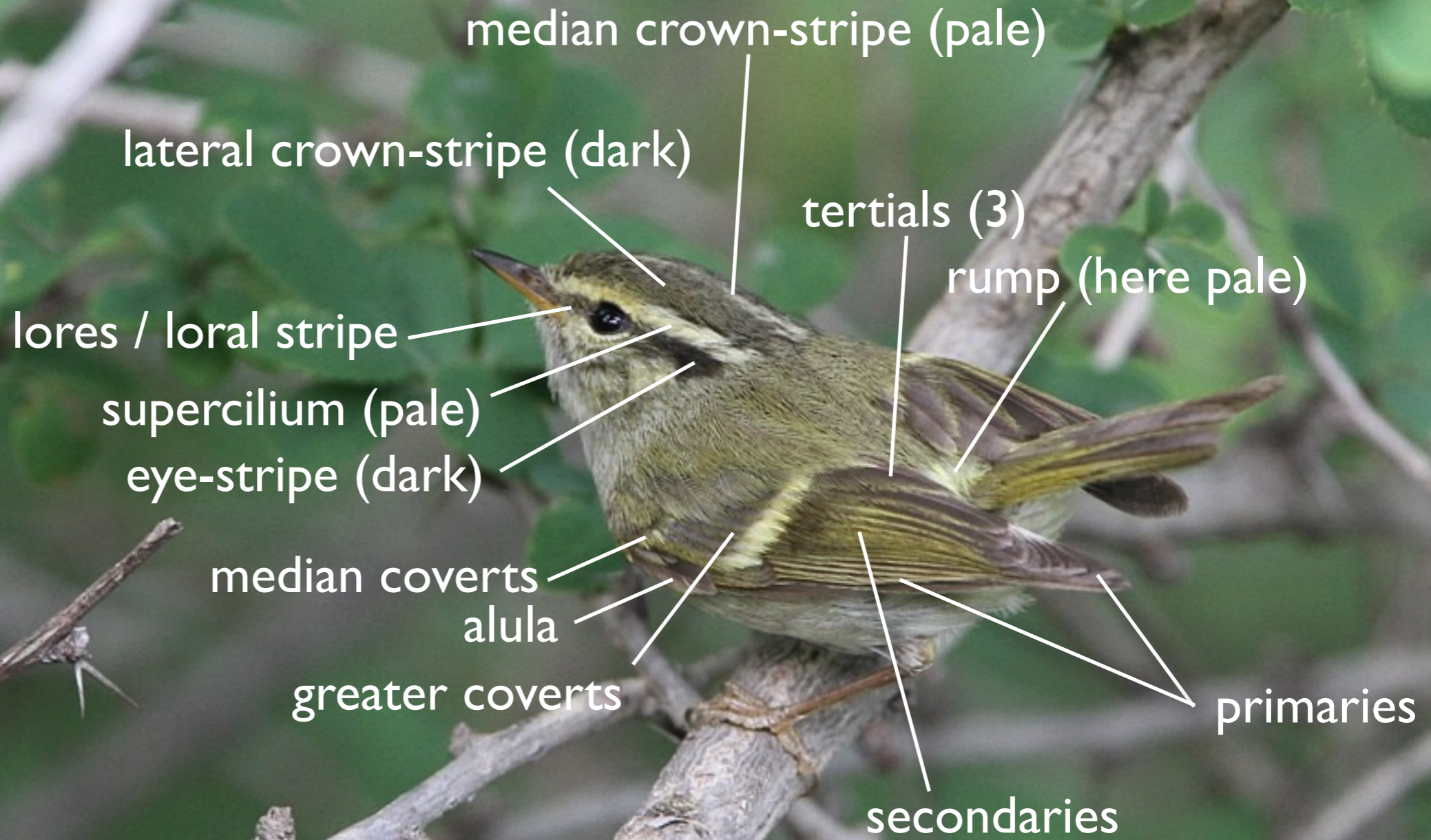
Problems

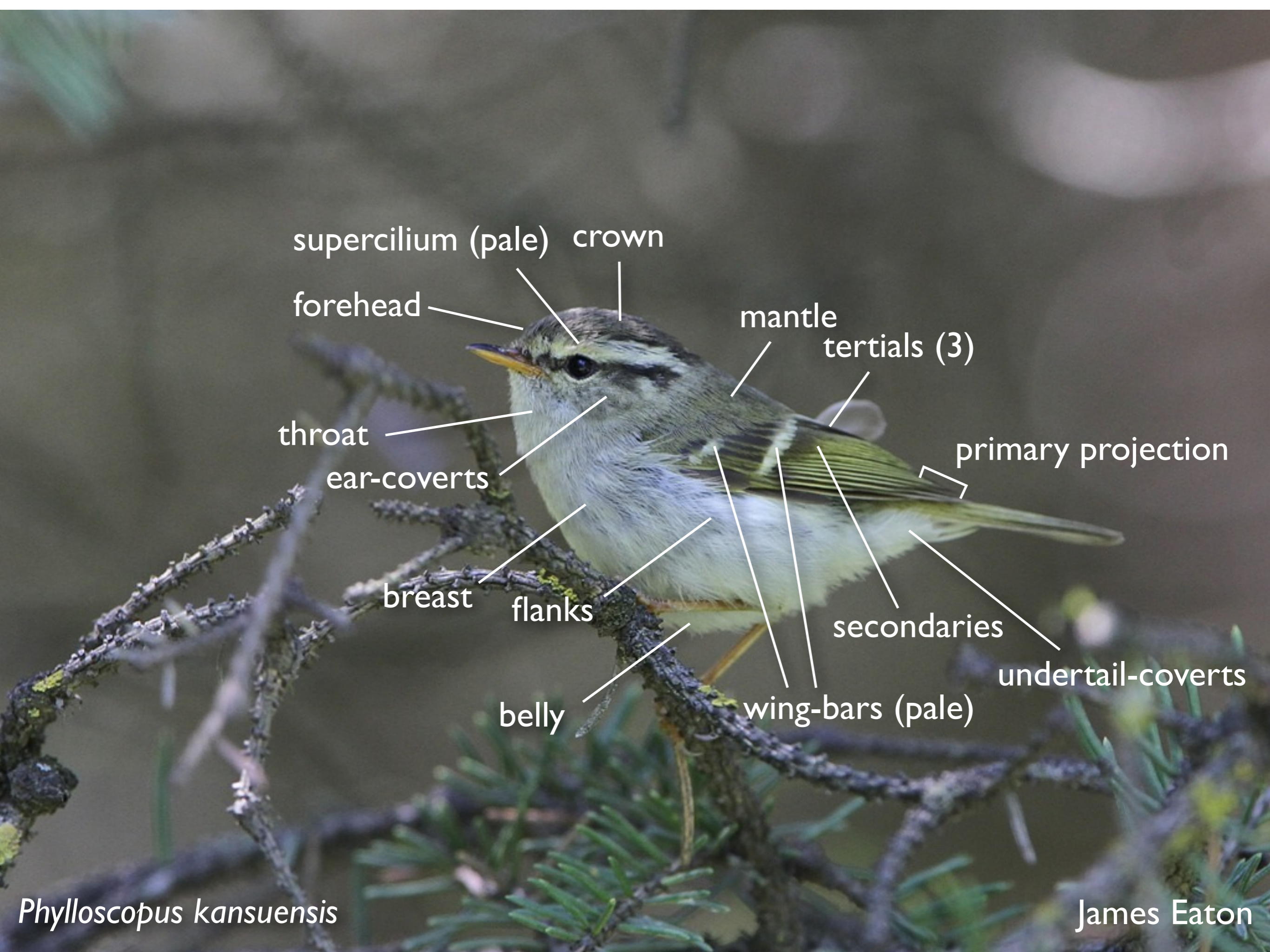
- Small
- Active, constantly on the move – often hard to see well
- Wear affects e.g. strength of wing-bars and colours; colours vary depending on light conditions
- Some species very similar

Solutions

- Carefully study as many characters as possible
- Songs and calls usually diagnostic

Plumage topography





supercilium (pale) crown

forehead

mantle

tertials (3)

throat

ear-coverts

primary projection

breast

flanks

secondaries

undertail-coverts

belly

wing-bars (pale)

Phylloscopus kansuensis

James Eaton

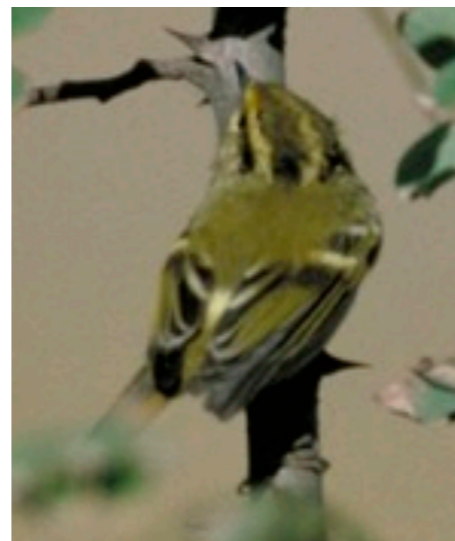
1. Pale wingbars: yes/no?



2. If yes: size "large"/small?



3. Focus on crown pattern (dark + pale stripes? stripes more distinct at rear?); pale tips to tertials?; dark markings on wings?; pale rump?; white in tail?



“Large” no pale wingbars, no or little yellow in plumage

Radde's
Warbler
P. schwarzi



Yellow-
streaked
Warbler
P. armandii

Dusky
Warbler
P. fuscatus
fuscatus



Smoky
Warbler
P. fuligiventer
weigoldi

Mountain Chiffchaff



P. sindianus Björn Johansson

Common Chiffchaff



P. collybita Göran Ekström

Willow Warbler



P. trochilus Göran Ekström

“Large”, no pale wingbars, distinct yellow on supercilium/ear-coverts/underparts

Wood Warbler



P. sibilatrix

Göran Ekström

Tickell's Leaf Warbler
P. affinis – almost
identical to Alpine

Grey-hooded Warbler



Göran Ekström

P. xanthoschistos

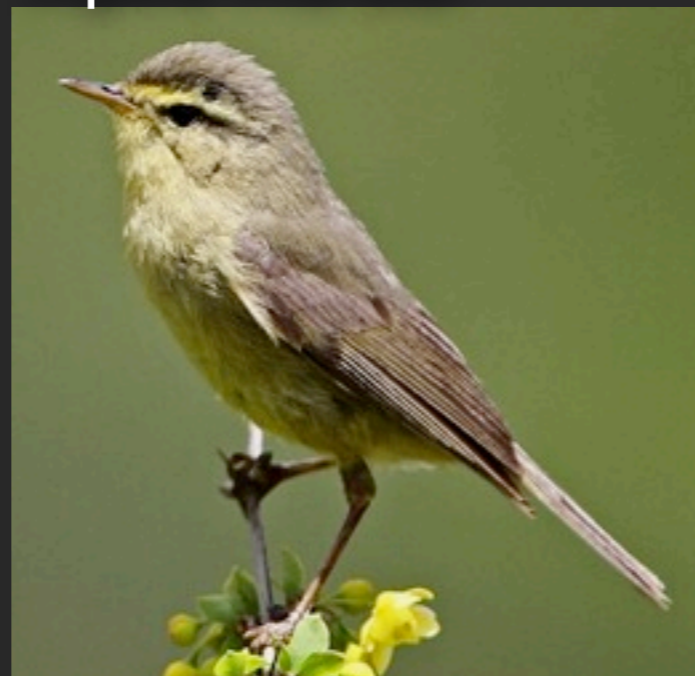
Sulphur-bellied Warbler



P. griseolus

Andrew Lassey

Alpine Warbler



P. occisinensis

James Eaton

Buff-throated Warbler



P. subaffinis

Zhou Huaming

“Large”, 1–2 pale wingbars, no pale median crown-stripe

Greenish Warbler

(br:W China)



Andrew Lassey

P. (trochiloides) viridanus

Greenish Warbler

(br: C China)



Zhou Huaming

P. trochiloides obscuratus

Two-barred Warbler

(br: NE China)



Göran Ekström

P. plumbeitarsus

Sakhalin Leaf Warbler

P. borealoides – almost identical to Pale-legged

Pale-legged Warbler



P. tenellipes

Göran Ekström

Large-billed Leaf Warbler



P. magnirostris

Zhou Huaming

Arctic Warbler



P. borealis

Göran Ekström

“Large”, 1-2 pale wingbars, pale median crown-stripe

Claudia's Leaf Warbler



P. claudiae

Zhou Huaming

Blyth's Leaf Warbler



P. reguloides

Zhao Chao

Hartert's Leaf Warbler



P. goodsoni fokiensis

James Eaton

Davison's Leaf Warbler

P. davisoni

Kloss's Leaf Warbler



P. ogilviegranti ogilviegranti

James Eaton

Emei Leaf Warbler



P. emeiensis

James Eaton

Eastern Crowned Warbler



P. coronatus

Shen Yue

“Large”, 1-2 pale wingbars, strong crown pattern,
bright yellow below

Limestone Leaf Warbler



P. calciatilis

Jocko Hammar

Hartert's Warbler



P. goodsoni goodsoni

Paul J. Leader

Sulphur-breasted Leaf
Warbler *P. ricketti* –
almost identical to
Limestone

Small, 1–2 pale wingbars, no/faint pale median crown-stripe, no pale rump patch

Yellow-browed Warbler



P. inornatus

Shen Yue

(migr., wi.)

Yellow-browed Warbler



P. inornatus

Zhou Huaming

Hume's Leaf Warbler



P. humei mandellii

James Eaton

(br: C China)

Hume's Leaf Warbler



P. humei humei

Andrew Lassey

(br:W China)

Small, 1–2 pale wingbars, pale median crown-stripe and pale rump patch

Pallas's Leaf Warbler

(br: NE China)



P. proregulus

Shen Yue

Gansu Leaf Warbler

(br: NC China)



P. kansuensis

James Eaton

Sichuan Leaf Warbler

(br: C China)



P. forresti

Zhou Huaming

Buff-barred Warbler



P. pulcher

Zhao Chao

Lemon-rumped Warbler
P. chloronotus (br: S Xizang)

Ashy-throated Warbler



P. maculipennis

James Eaton

Chinese Leaf Warbler



P. yunnanensis

James Eaton

Radde's Warbler *P. schwarzi*



Göran Ekström



Shen Yue



Some 1st-winter birds quite yellow below

Bo Peterson/Beidaihe Bird Observatory

Yellow-streaked Warbler *P. armandii*



Zhou Huaming



Zhou Huaming



Per Alström



James Eaton

In both, note rather short, heavy bill with curved culmen; supercilium more buffish in front than at rear. *P. schwarzi* on average stronger bill + proportionately shorter tail. Song + especially calls.

Dusky Warbler *P. fuscatus*



Zhou Huaming



Göran Ekström



Urban Olsson

Smoky Warbler *P. fuligiventer weigoldi*



James Eaton

In both, note thin bill; supercilium whiter in front than at rear (cf. *P. schwarzi*, *P. armandii*).
P. fuligiventer weigoldi greyer above, whiter below, on average darker lower mandible + legs.

Note how colours may change with light.

Alpine Warbler *P. occisinensis* (formerly *P. affinis*)



Göran Ekström



Zhou Huaming

Buff-throated Warbler *P. subaffinis*



P. occisinensis on average more pure yellow hues, more prominent supercilium (esp. anteriorly), more contrastingly patterned ear-coverts, less dark on lower mandible; longer bill + shorter tail. Song + calls.

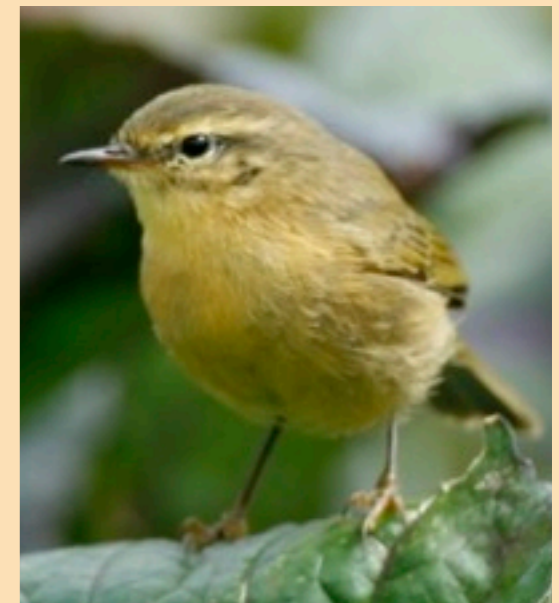


Zhou Huaming



Zhou Huaming

P. affinis in Xizang. In practice inseparable from *P. occisinensis*.



All: Zhou Huaming

Greenish Warbler
Phylloscopus trochiloides obscuratus
(br: C China)



Zhou Huaming



James Eaton

Large-billed Leaf Warbler *P. magnirostris*



Zhou Huaming



Lower mandible mainly dark with pale pinkish base in Large-billed; diffuse darker tip and more orange-tinged lower mandible in Greenish. Song + call!



Per Alström



Per Alström

Arctic Warbler
Phylloscopus borealis



Göran Ekström



Bo Peterson/Beidaihe Bird Observatory

Two-barred Warbler
Phylloscopus plumbeitarsus



Göran Ekström



Chu Jian-mei



Bo Peterson/Beidaihe Bird Observatory



Göran Ekström



Tang Jia-lin

Arctic more drawn-out shape; shorter, narrower, less clearcut wingbars; on average narrower supercilium, more contrastingly patterned bill, paler legs. Song + call!



Shen Yue

Arctic Warbler
Phylloscopus borealis



Pale-legged Leaf Warbler
Phylloscopus tenellipes



Two-barred Warbler
Phylloscopus plumbeitarsus

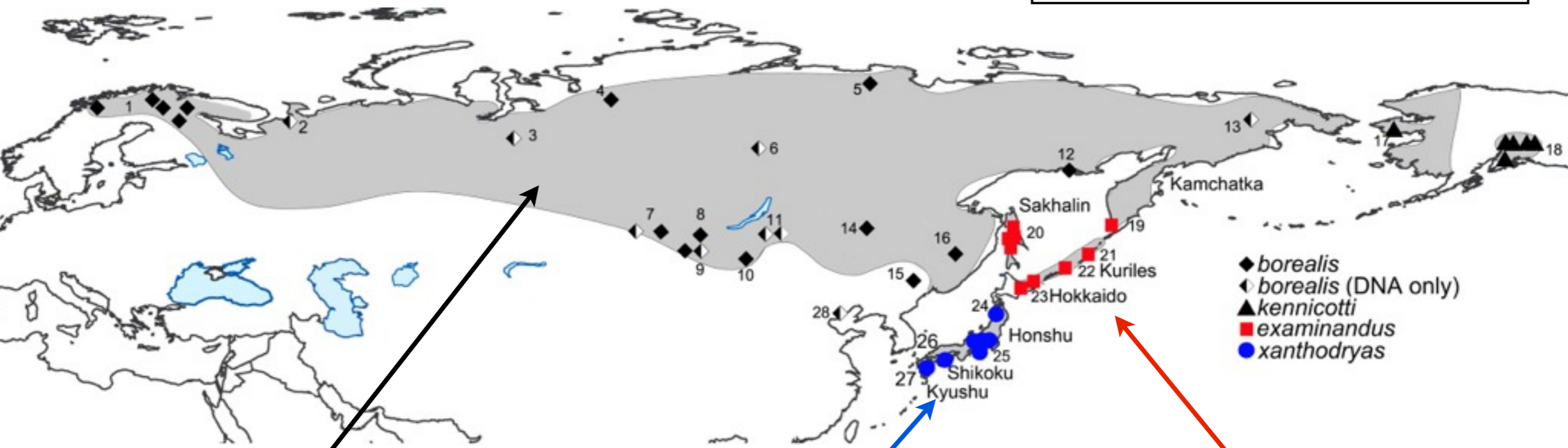


Pale-legged: wing-bars variable, 0–2, usually at least 1; contrastingly greyer crown; mainly dark lower mandible, very pale legs; flicks tail downward. Song + call!

Sakhalin Leaf Warbler *P. borealoides* (rare SE China on migration) virtually indistinguishable from Pale-legged except by song.

Arctic Warbler *P. borealis*, Kamchatka Leaf Warbler *P. examinandus*,
Japanese Leaf Warbler *P. xanthodryas*

Very similar appearances,
different songs + calls.



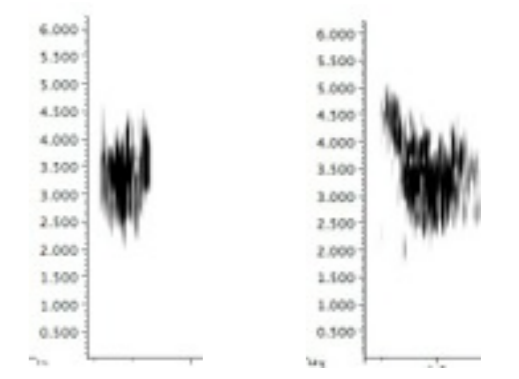
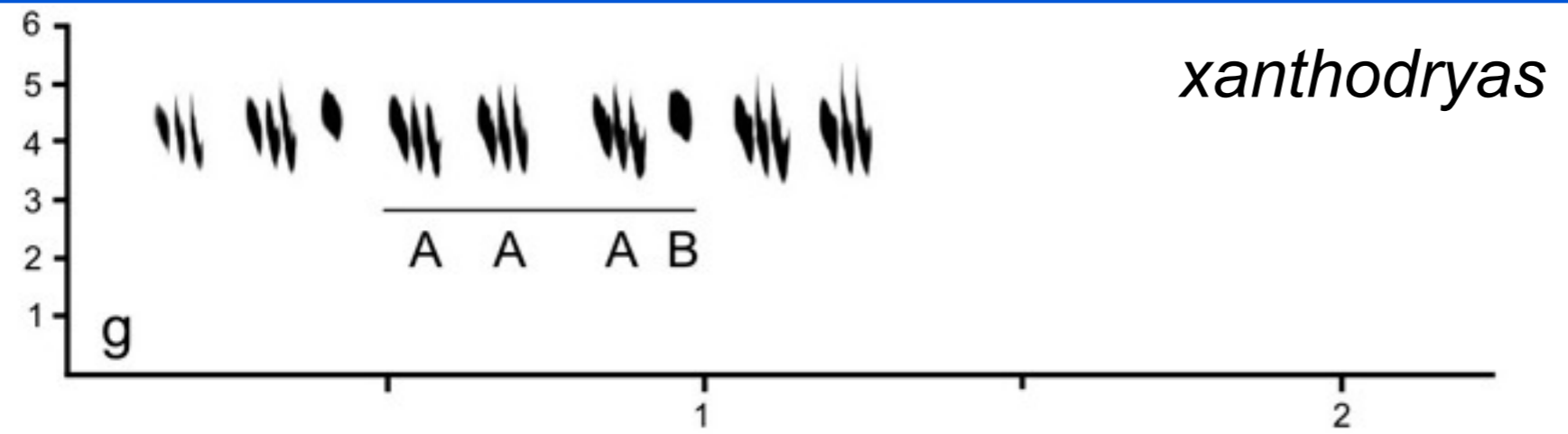
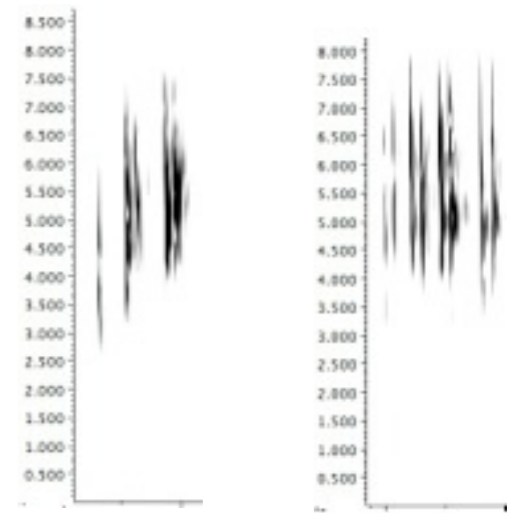
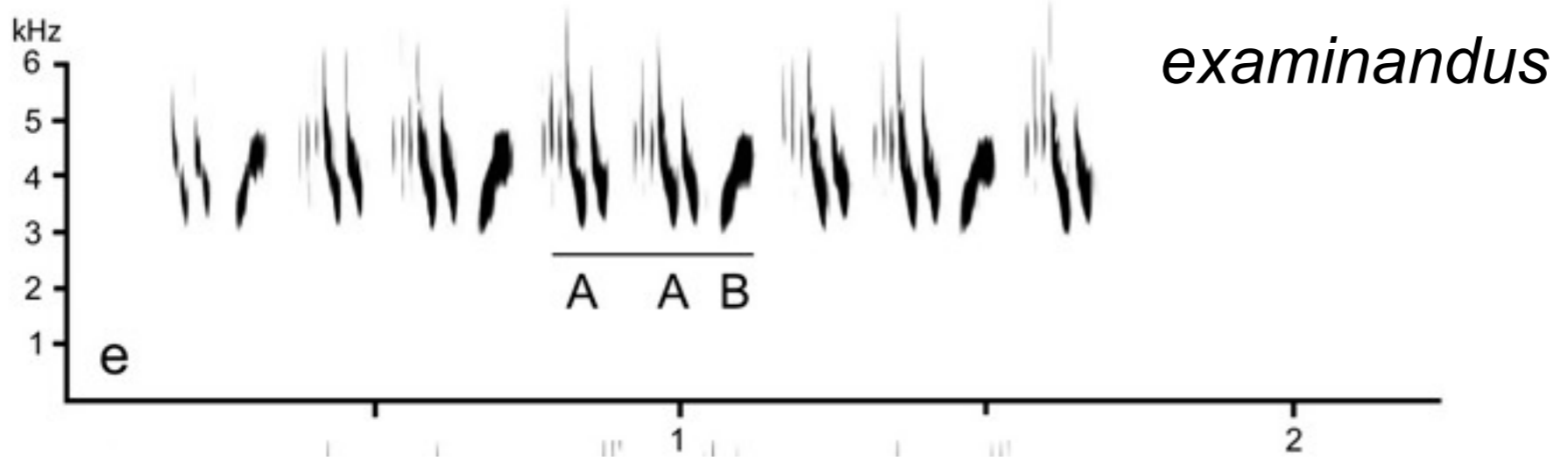
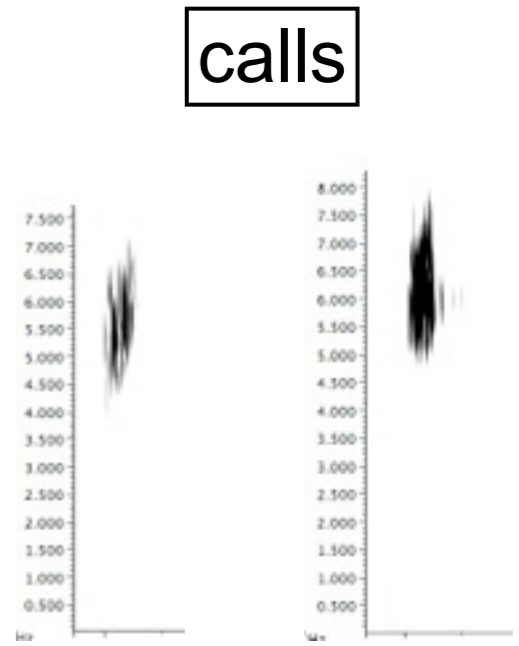
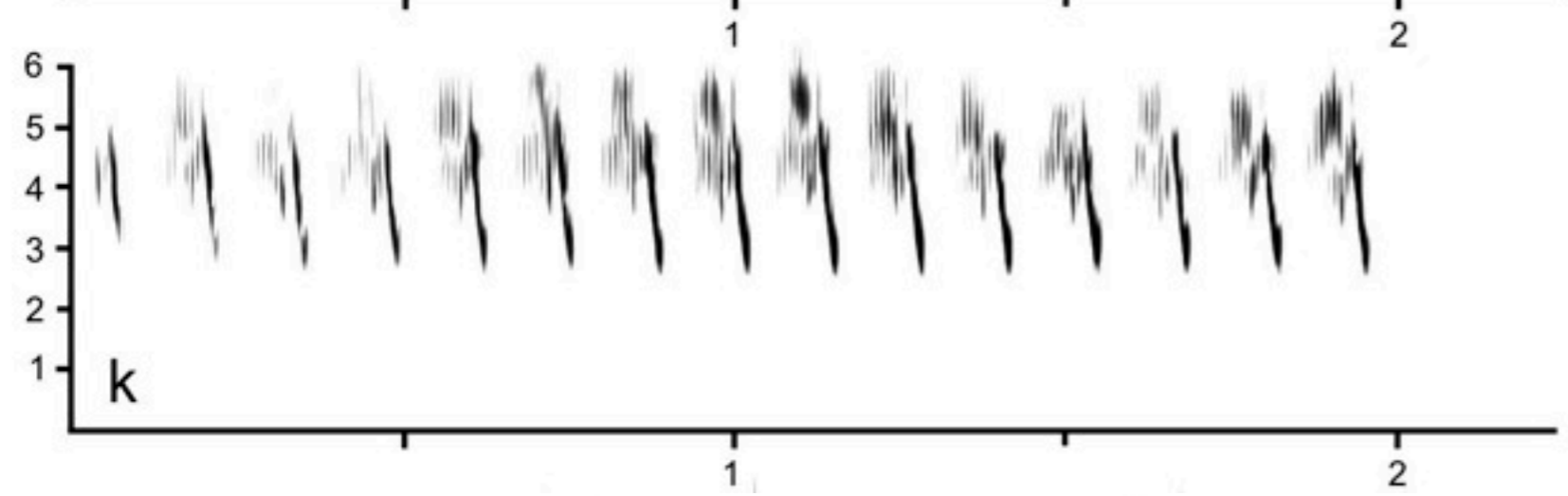
Phylloscopus borealis Magadan, Russia,
3 July 2007. Takema Saitoh.



Phylloscopus xanthodryas Iwate,
Honshu, Japan, 29 July 2004. Takema
Saitoh. *On average more yellowish
below than two others*



Phylloscopus examinandus Hokkaido,
Japan, 16 July 2004. Takema Saitoh.



Eastern Crowned Warbler *P. coronatus*



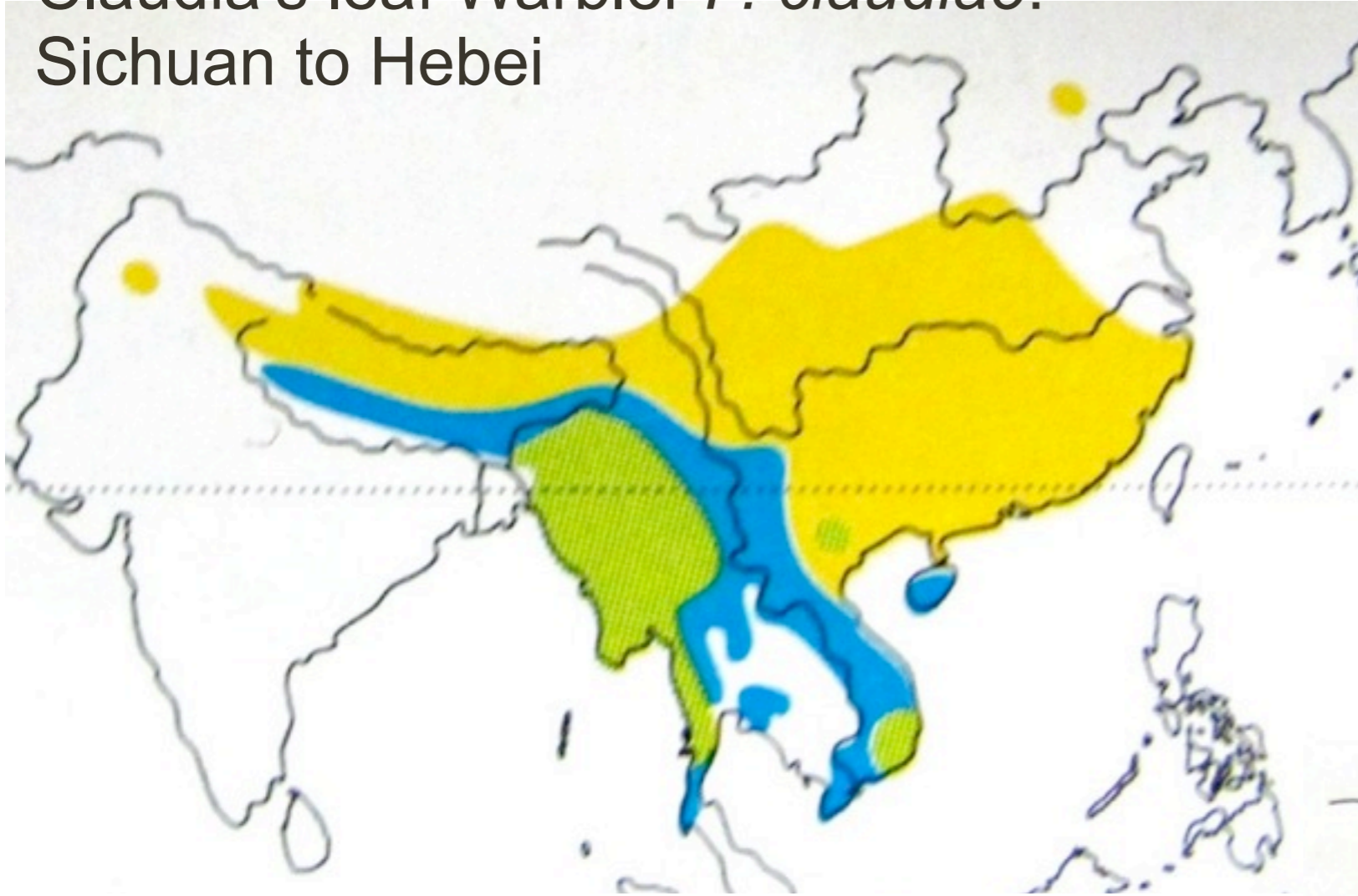
Claudia's leaf Warbler *P. claudiae*



Wingbars +
crown pattern
(crown-stripes
more black/
white at rear in
Blyth's). Song +
call (Crowned
rarely calls)!



Claudia's leaf Warbler *P. claudiae*:
Sichuan to Hebei



Hartert's Leaf Warbler *P. goodsoni*: Guangdong to
Fujian

Kloss's Leaf Warbler *P. ogilviegranti*: Shaanxi,
Sichuan, Fujian

Blyth's Leaf Warbler *P. reguloides*:
Xizang, Yunnan (to SE Asia)

Davison's Leaf
Warbler *P. davisoni*:
Yunnan (to SE Asia)



Maps from Handbook of the Birds of the World
(del Hoyo et al. 2006. Lynx Edicions)

Claudia's Warbler *P. claudiae*



All: Per Alström

All: Per Alström



Zhou Huaming

P. claudiae



P. o. disturbans



Urban Olsson

Kloss's smaller, more yellow on supercilium + ear-coverts; sometimes dark tip to lower mandible; slight differences outer tail-feathers. Song. Wing-flicking in Claudia's (breeding).

Hartert's Warbler *P. goodsoni fokiensis*

Kloss's Warbler *P. ogilviegranti ogilviegranti*



Hartert's/Blyth's larger, less yellow than Kloss's/Davison's; songs. Former pair very similar. Kloss's more yellow, less white on outer tail-feathers than Davison's (only visible in hand).

Blyth's Leaf Warbler *P. reguloides ticehursti*

Davison's Leaf Warbler *P. davisoni*



Emei Leaf Warbler *P. emeiensis*



Urban Olsson



Per Alström



Per Alström



Per Alström

Claudia's Leaf Warbler

Hainan Leaf Warbler *P. hainanus*



Both: Urban Olsson

Emei less distinct crown-pattern than Claudia's. Song + calls!

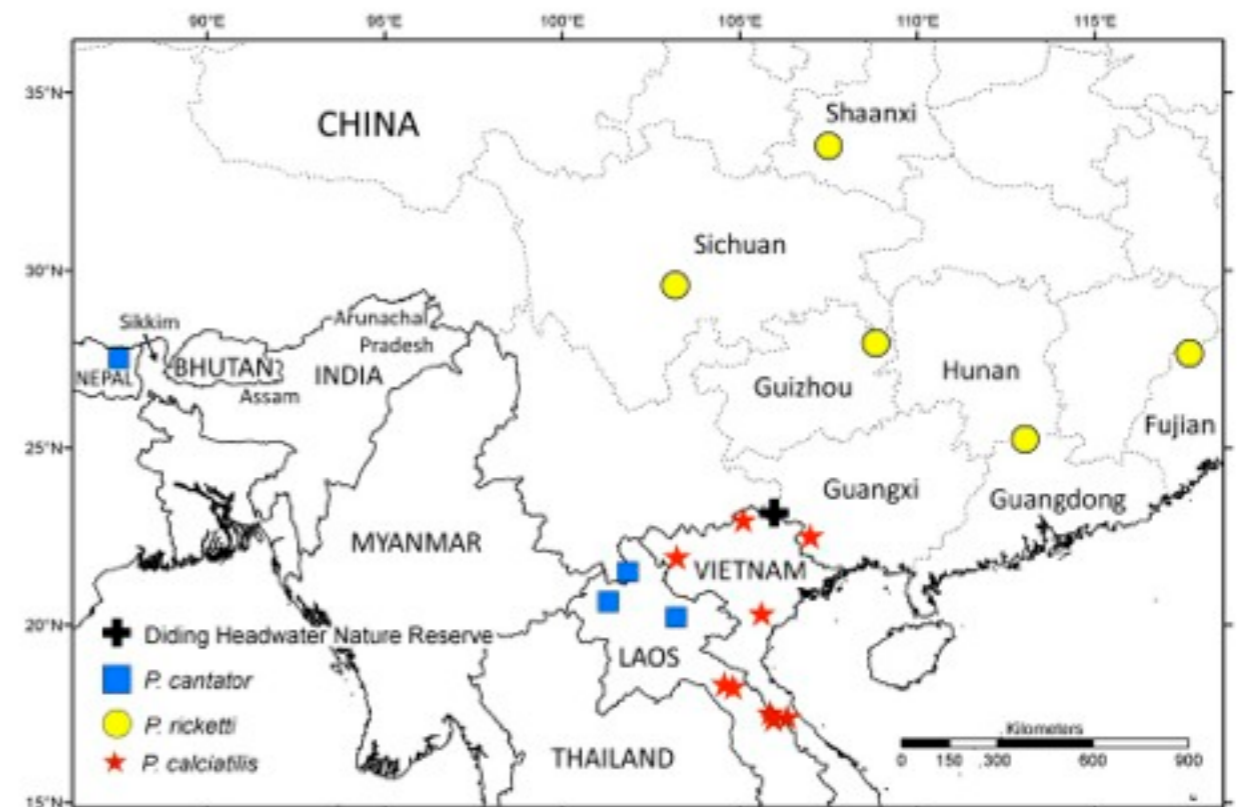
Limestone Leaf Warbler

Phylloscopus calciatilis



Sulphur-breasted Warbler

Phylloscopus ricketti



Yellow-browed Warbler *P. inornatus*



Shen Yue



Shen Yue



Shen Yue

Hume's duller when fresh, anterior wing-bar indistinct (Yellow-browed similar when worn); lower mandible + legs on average darker in Hume's. Song + calls!

Hume's Leaf Warbler *P. humei*

P. h. humei: W China



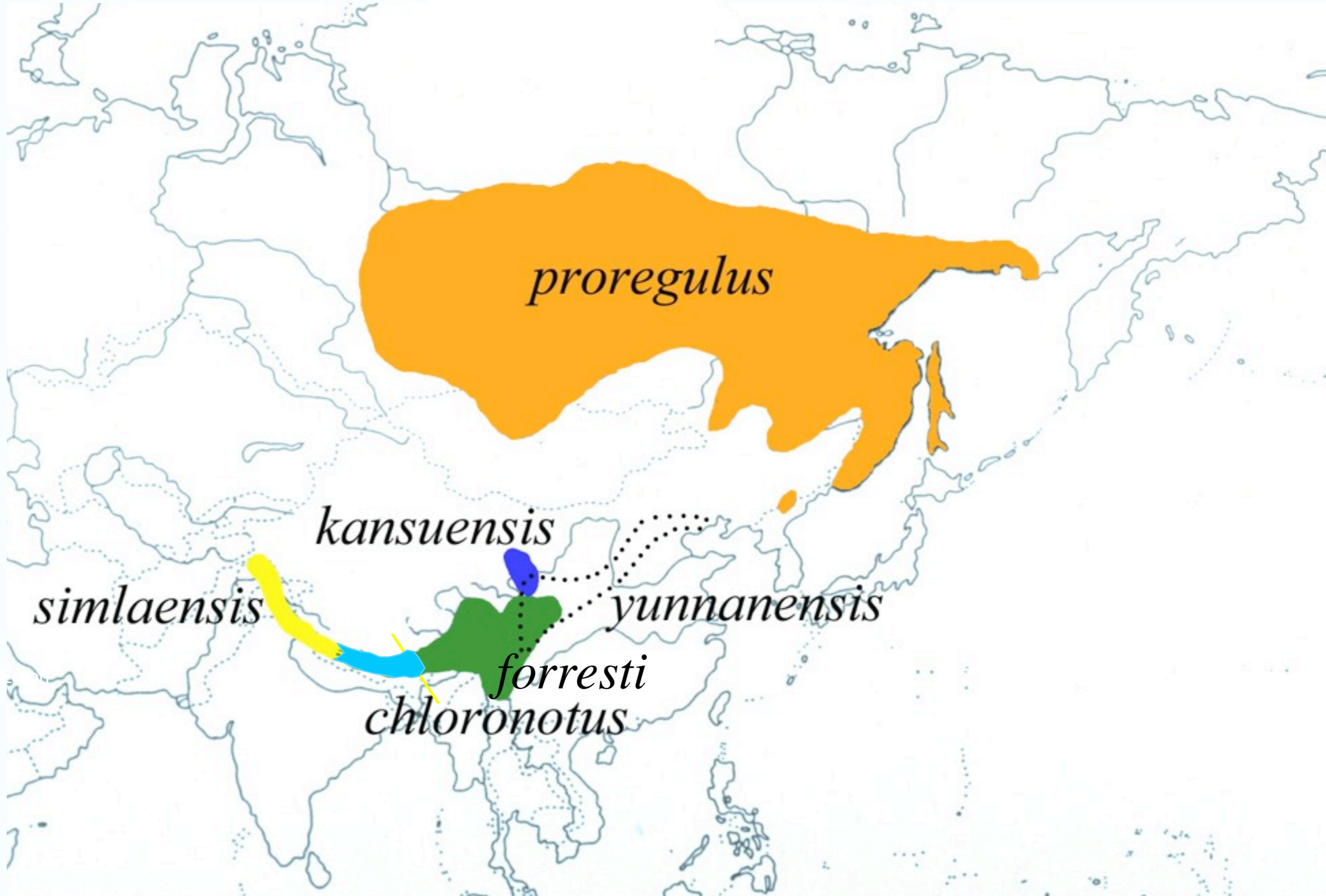
Shen Yue

P. h. mandellii: C China



Göran Ekström

Pallas's Leaf Warbler complex



Pallas's Leaf Warbler *P. proregulus*



Gansu Leaf Warbler *P. kansuensis*



Pallas's most brightly coloured, especially on supercilium. Gansu & Sichuan extremely similar, on average paler lower mandible + legs in former. Chinese less distinct pale median crown-stripe (esp. anteriorly) + dark eye-stripe; lacks dark bar on bases of secondaries. In all, song + call!

Sichuan Leaf Warbler *P. forresti*



Chinese Leaf Warbler *P. yunnanensis*



Buff-barred Warbler *P. pulcher*

Ashy-throated Warbler *P. maculipennis*



Zhou Huaming

Buff-barred overall dull, usually buffish wing-bar, slender dark bill; Ashy-throated grey/white head + breast, pale yellow rest of underparts. Song!



Shen Yue



Per Alström

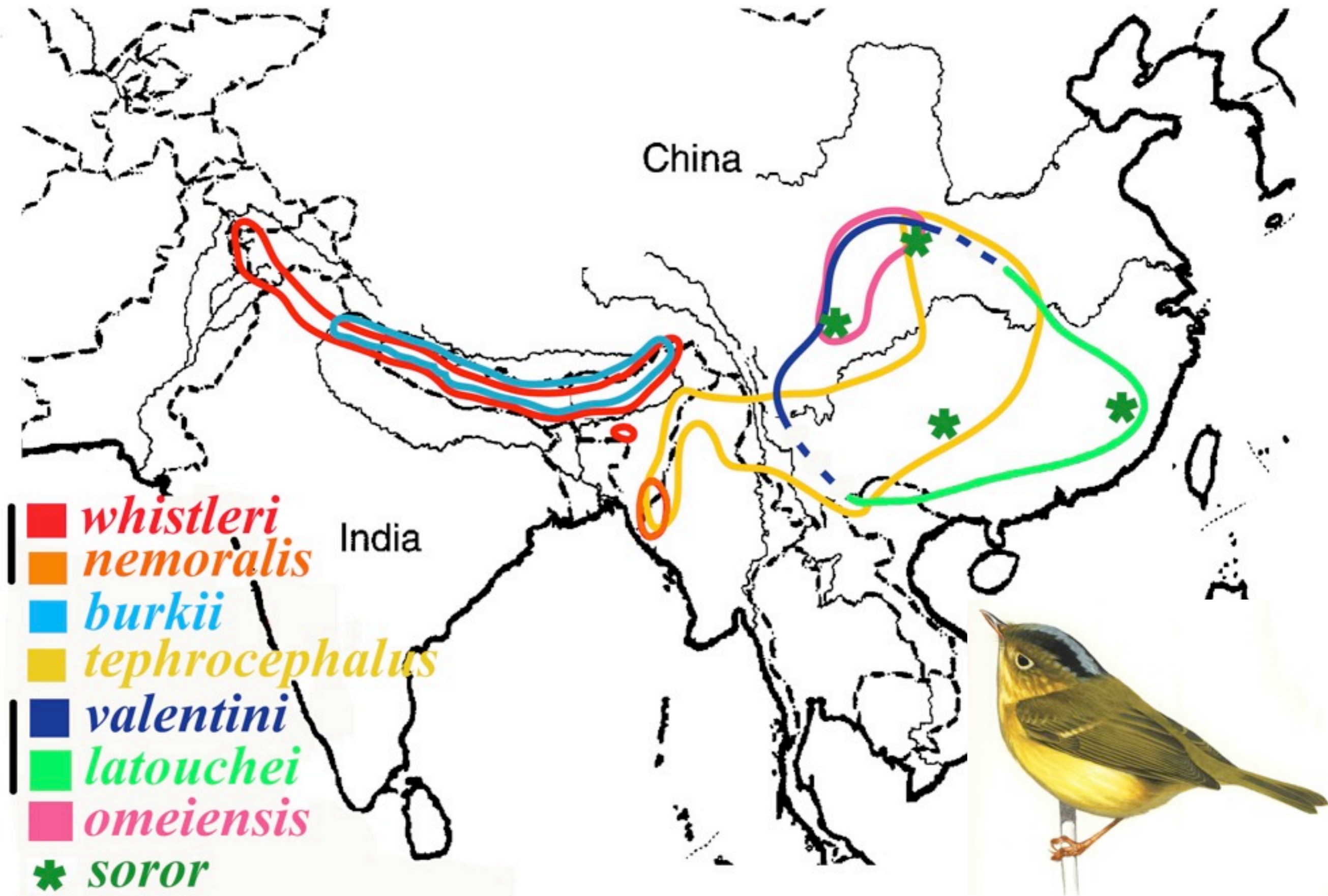


Per Alström



All: Zhou Huaming

“Golden-spectacled Warblers”



Himalayas

Seicercus burkii



Seicercus whistleri



S. burkii more contrasting crown pattern than *S. whistleri*; 2 white outer tail-f. vs. 3 in *S. whistleri*; eye-ring usually thinly broken at rear. In both, less grey on crown than in Chinese species.

China

Seicercus omeiensis



Seicercus valentini



S. valentini & *S. omeiensis* generally not distinguishable by plumage, but crown pattern on average more contrasting in latter.

All best distinguishable by song + calls!

Seicercus tephrocephalus



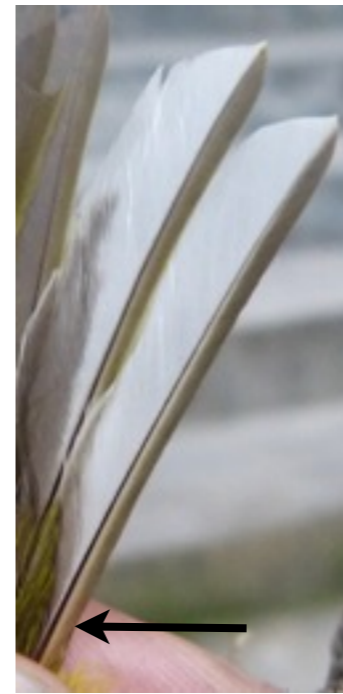
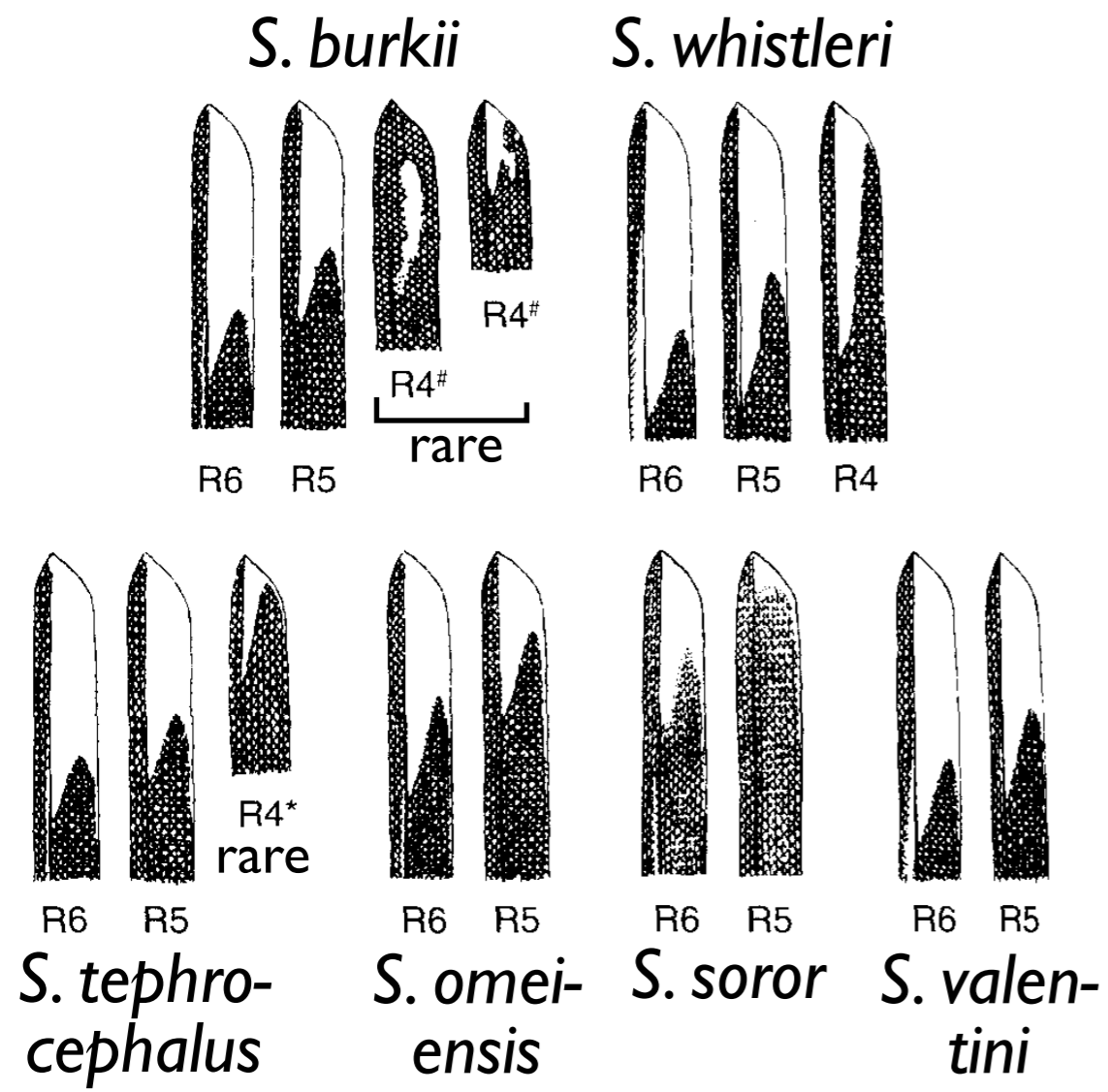
S. tephrocephalus most contrasting crown pattern; eye-ring usually thinly broken at rear.

S. soror dullest crown pattern; proportionately large bill + short tail.

Seicercus soror



Painting by Ian Lewington, from Alström & Olsson (1999), slightly modified digitally by Anders Rådén



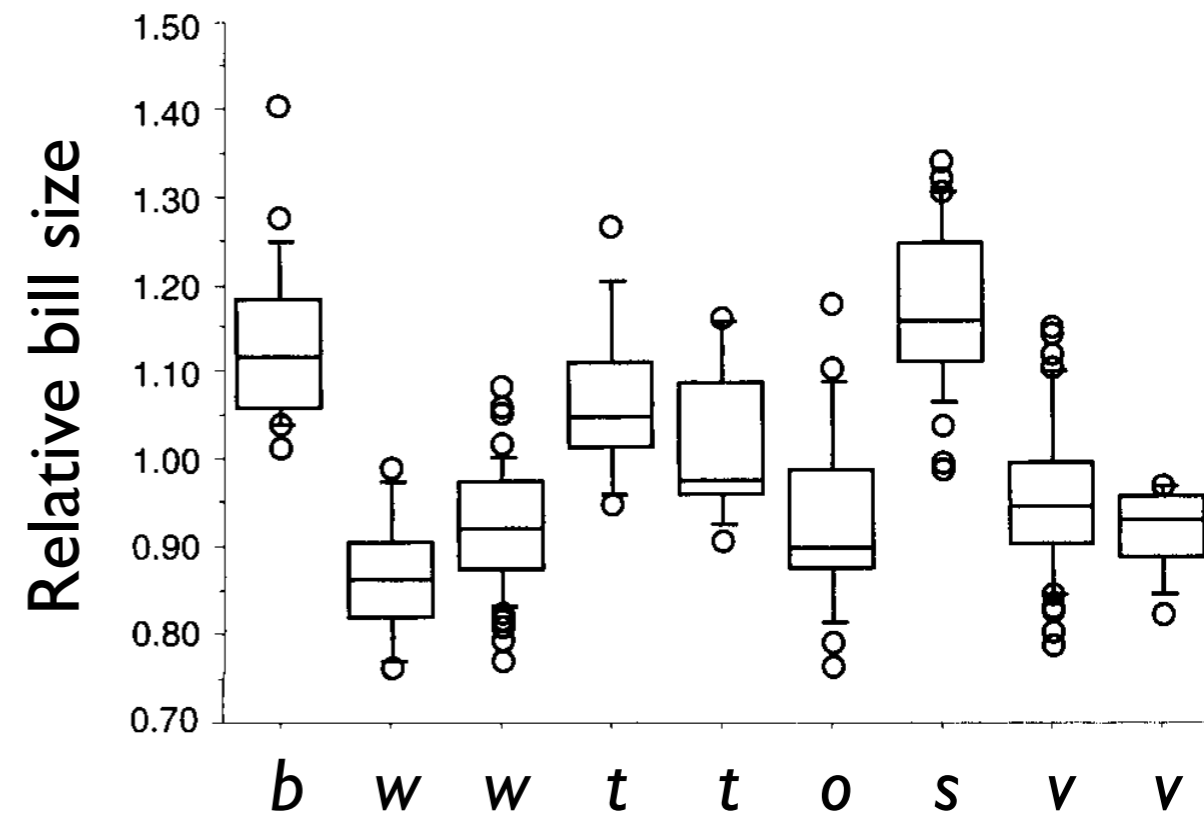
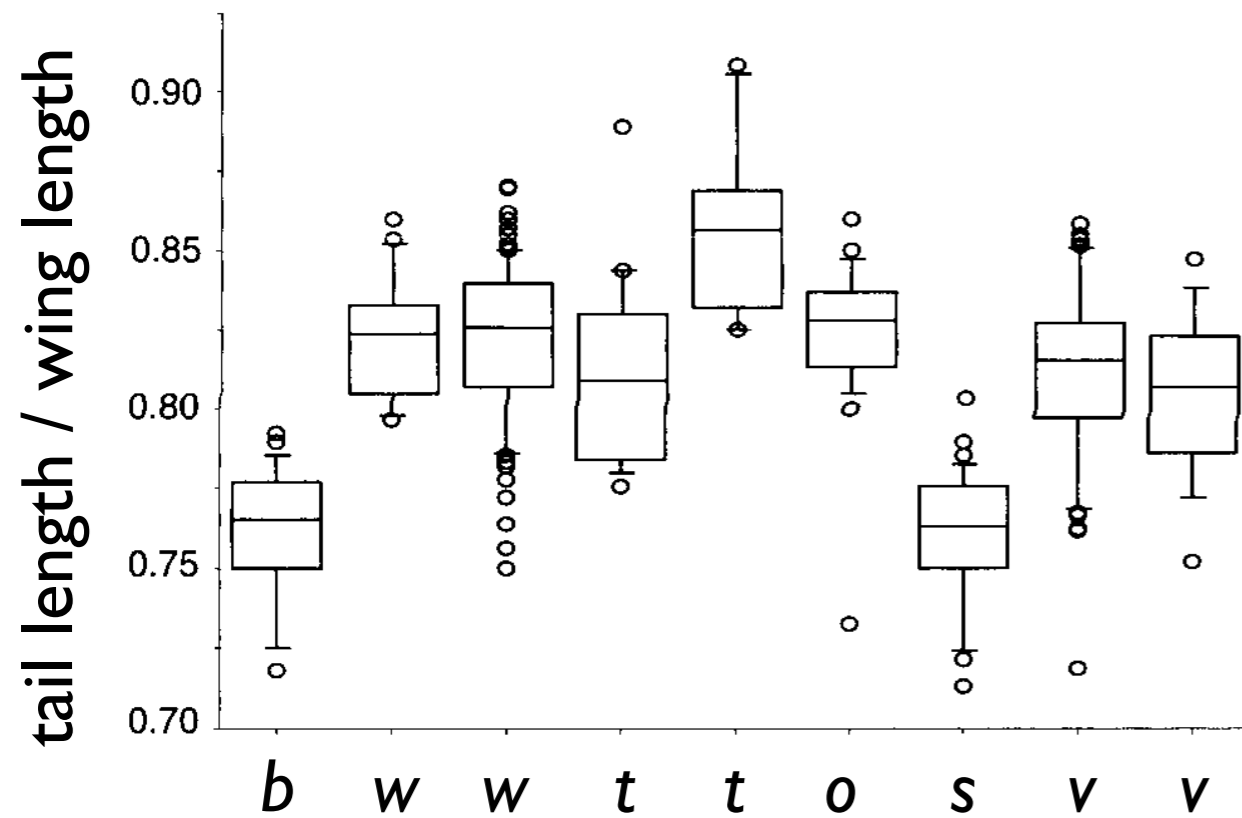
S. omeiensis



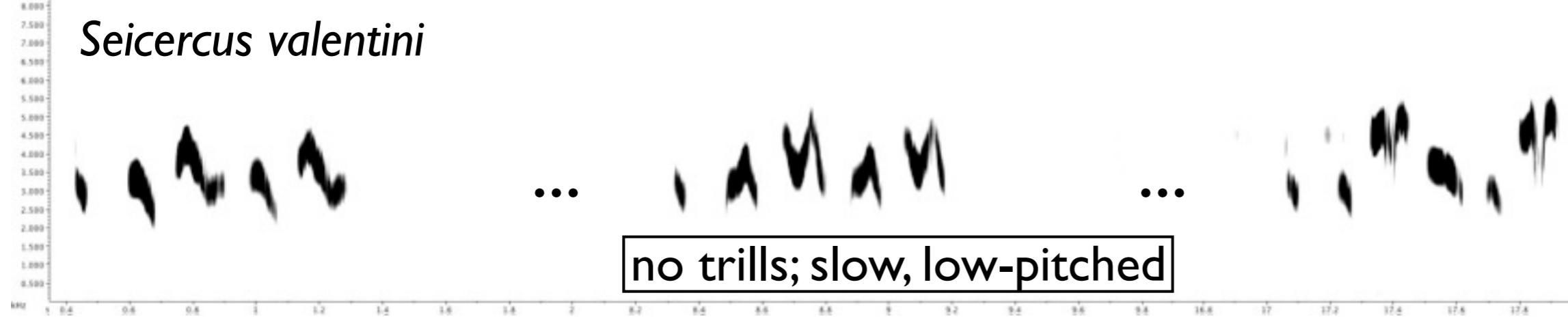
S. valentini



S. soror

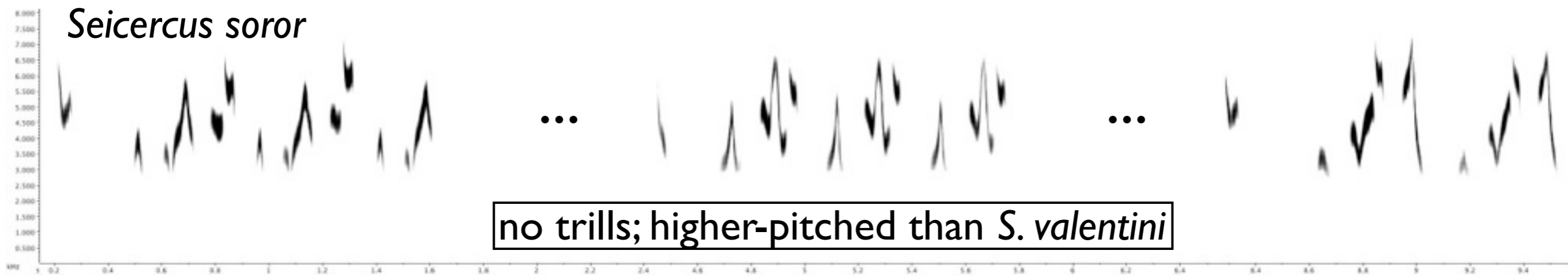


Seicercus valentini



no trills; slow, low-pitched

Seicercus soror



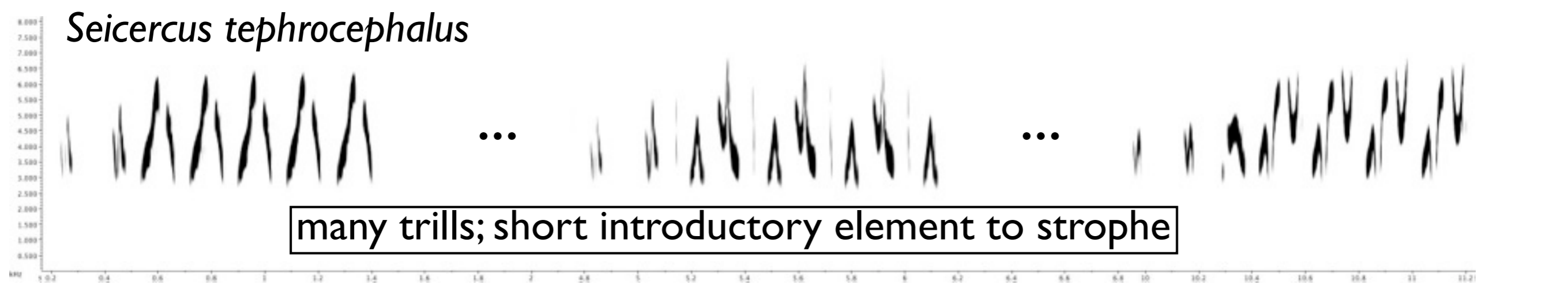
no trills; higher-pitched than *S. valentini*

Seicercus omeiensis

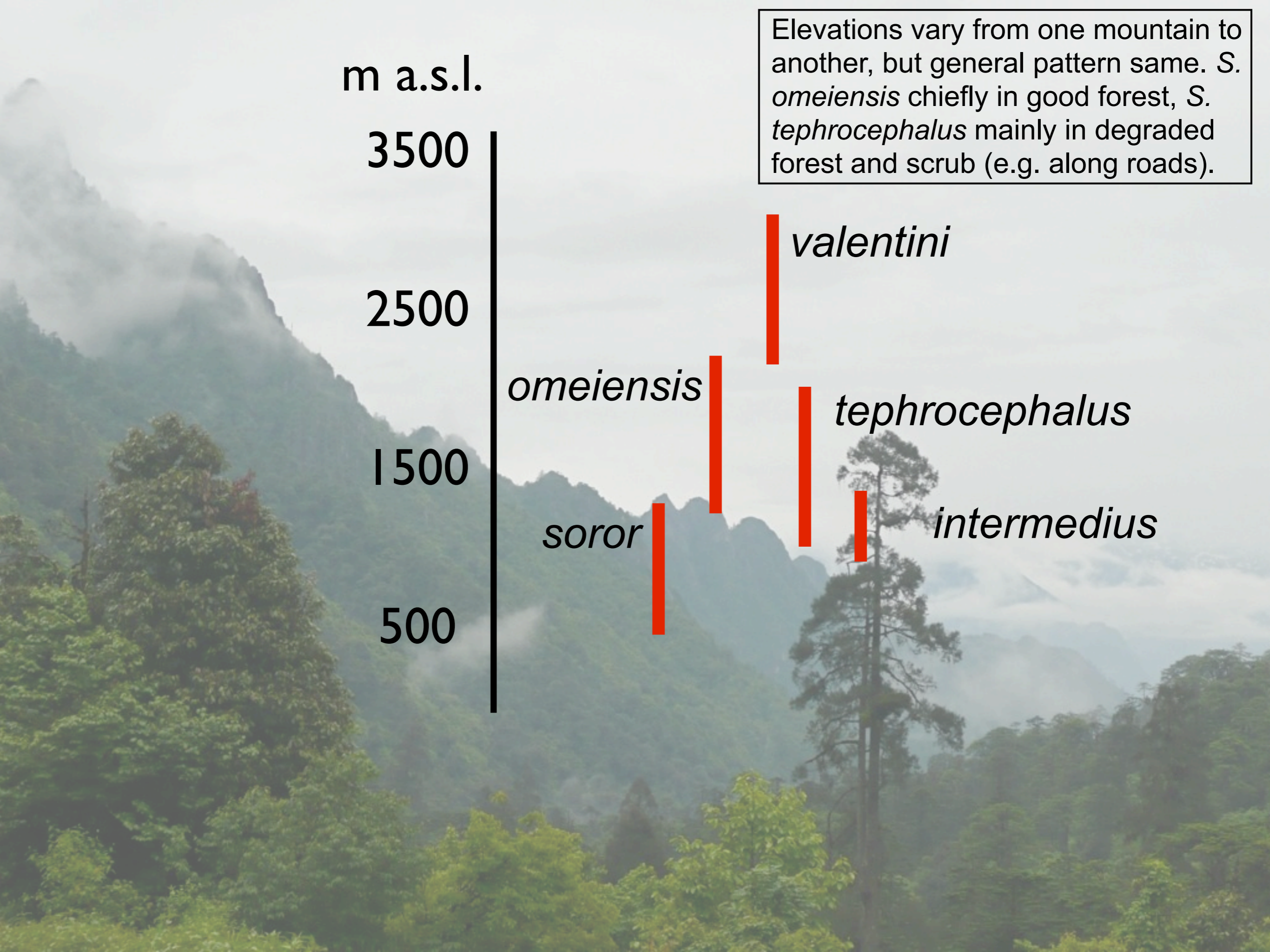


includes some trills; usually no introductory element to strophe

Seicercus tephrocephalus



many trills; short introductory element to strophe



m a.s.l.

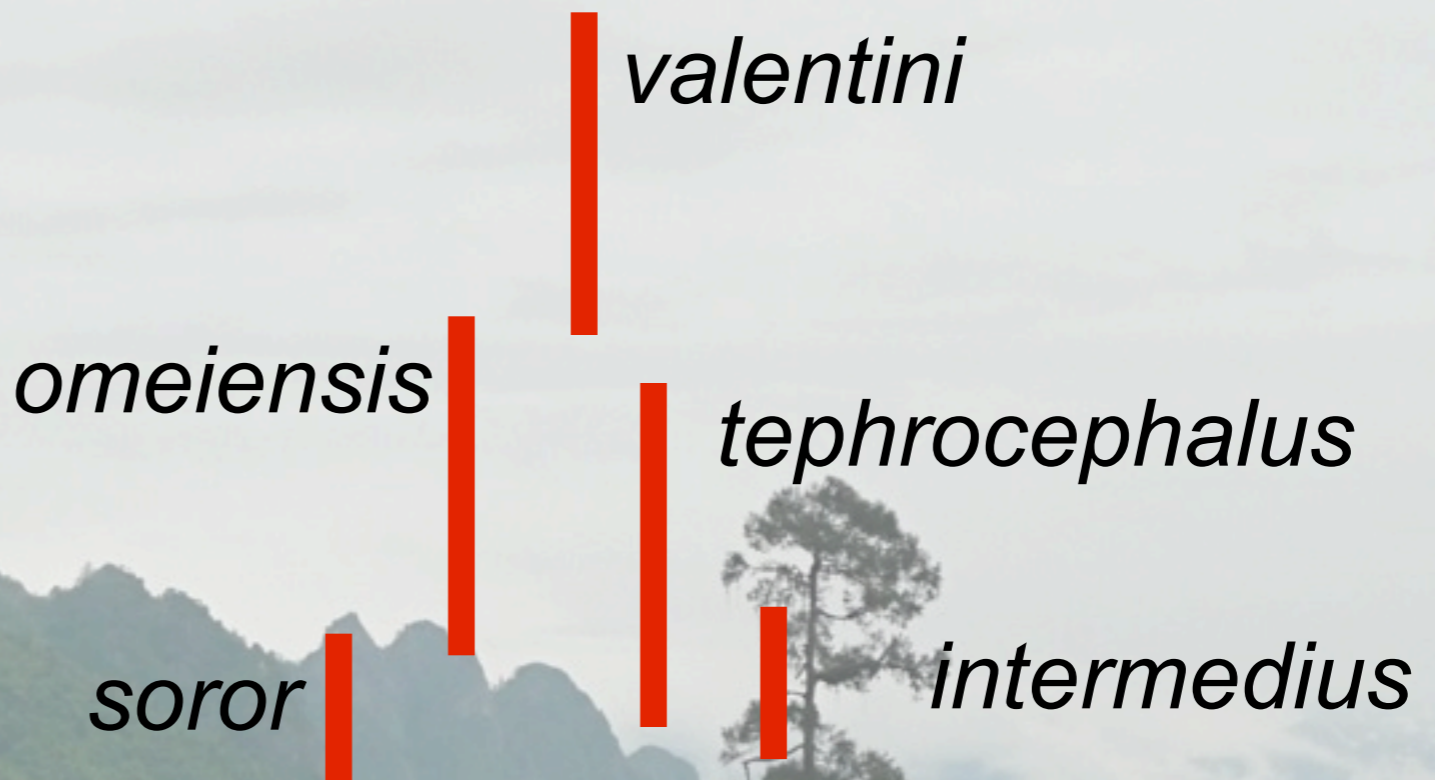
3500

2500

1500

500

Elevations vary from one mountain to another, but general pattern same. *S. omeiensis* chiefly in good forest, *S. tephrocephalus* mainly in degraded forest and scrub (e.g. along roads).



Bianchi's Warbler *S. valentini*



James Eaton

Grey-cheeked Warbler *S. poliogenys*



James Eaton

White-spectacled Warbler *S. affinis intermedius*



"intermedius" morph

James Eaton

Grey-crowned Warbler *S. tephrocephalus*



Zhang Yongwen

Eye-ring broken above eye in Grey-cheeked + White-spectacled; eye-ring white in former (and in nominate White-spectacled; Himalayas); grey ear-coverts, poorly marked lateral crown-stripes in Grey-cheeked.



"cognitus" morph: no grey on crown

James Eaton



"cognitus" morph

Urban Olsson



"intermedius" morph

Urban Olsson

Thanks

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