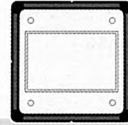


## Empress *Heliodoxa imperatrix* and Green-crowned Brilliants *H. jacula*



### Identification of female and immature male Empress *Heliodoxa imperatrix* and Green-crowned Brilliants *H. jacula*

Two similar species of *Heliodoxa* hummingbirds occur within the Chocó of Colombia and Ecuador. One, Empress Brilliant *H. imperatrix*, is endemic to the region. The other, Green-crowned Brilliant *H. jacula*, occurs locally from Costa Rica south to north Colombia<sup>1</sup> and along the west slope of the Andes south to at least Loja, Ecuador<sup>2,5</sup>. *H. imperatrix* and *H. jacula* appear to be sympatric only at 400–1,800 m in south-west Colombia and north-west Ecuador<sup>3,4</sup>.

Plumages of *H. imperatrix* and *H. jacula* are similar at all ages. The only illustrations of female *H. imperatrix* are in Schuchmann<sup>5</sup> and Ridgely & Greenfield<sup>3</sup>. Schuchmann<sup>5</sup> does not adequately differentiate it from *H. jacula*, but there is an excellent illustration in Ridgely & Greenfield<sup>3</sup>. All plumages are described in both. The principal plumage differences between adult female *H. imperatrix* and *H. jacula* are that the latter's underparts are white, heavily spotted with green disks (Fig. 1). The throat and breast of female *H. imperatrix* are similar to *H. jacula*, but the belly is uniform golden-green, contrasting with the breast (Fig. 2). Immature males of both have duller, less iridescent, plumage than adult males, the chin and throat of immatures being extensively buff or cinnamon. This buffy coloration may appear only as a malar stripe once juvenile feathers are replaced. The underparts of immature male *H. imperatrix* are grey, spotted with green disks (Fig. 3) and generally lack the golden-green belly spotting of adult males. Immature male *H. jacula* is similar, but lacks the elongated feathering at the base of the bill characteristic of *H. imperatrix*. The underparts are more heavily spotted green and rarely appear greyish (Fig. 4). The purple throat-patch of adult males is small, but usually visible in immature males under good viewing conditions. Another feature that may be helpful is tail colour: black in *H. jacula* and olive in *H. imperatrix*. In summary, plumage characteristics of female and immature *H. imperatrix* and *H. jacula* have not been fully covered in field guides. Though some plumage similarities exist between them, they are readily identifiable under most circumstances.

### Acknowledgments

I thank Clifford E. Shackelford and John C. Arvin for comments on a previous draft.

### References

1. American Ornithologists' Union (1998) *Checklist of North American birds*. Seventh edition. Washington DC: American Ornithologists' Union.
2. Best, B. J., Checker, M., Thewlis, R. M., Best, A. L. & Duckworth, W. (1996) New bird breeding data from southwestern Ecuador. *Orn. Neotrop.* 7: 69–73.
3. Ridgely, R. S. & Greenfield, P. J. (2001) *The birds of Ecuador*. Ithaca, NY: Cornell University Press.
4. Salaman, P. G. W. & Mazariegos H., L. A. (1998) The hummingbirds of Nariño. *Cotinga* 10: 30–36.
5. Schuchmann, K. L. (1999) Family Trochilidae (hummingbirds). In: del Hoyo, J., Elliott, A. & Sargatal, J. (eds.) *Handbook of the birds of the world*, 5. Barcelona: Lynx Edicions.

### Mark W. Lockwood

Natural Resource Program, Texas Parks and Wildlife Department, 4200 Smith School Road, Austin, Texas 78744, USA.

### Photos on back cover

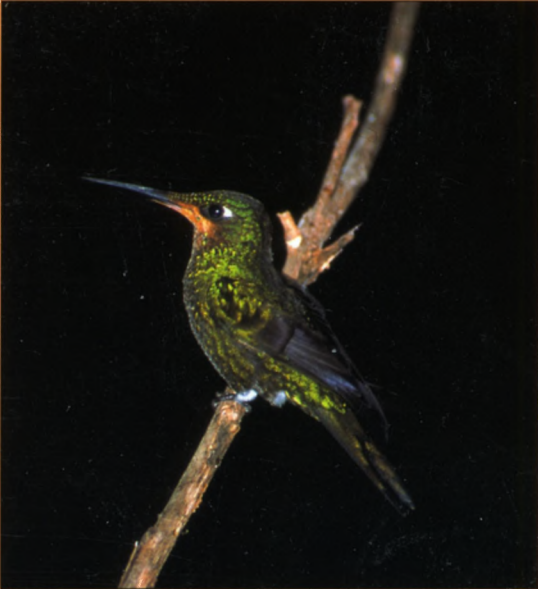
- Figure 1. Adult female Green-crowned Brilliant *Heliodoxa jacula*, near Monteverde, Puntarenas, Costa Rica, 5 March 1998 (Mark W. Lockwood)
- Figure 2. Adult female Empress Brilliant *Heliodoxa imperatrix*, near Mindo, Pichincha, Ecuador, 1 September 2000 (Mark W. Lockwood)
- Figure 3. Immature male Empress Brilliant *Heliodoxa imperatrix*, near Mindo, Pichincha, Ecuador, 1 September 2000 (Mark W. Lockwood)
- Figure 4. Immature male Green-crowned Brilliant *Heliodoxa jacula*, Cinchonia, Alajuela, Costa Rica, 24 January 1997 (Mark W. Lockwood)



1



2



3



4