

Species Fact Sheets

Order: Coraciiformes
Scientific Name: *Aceros corrugatus*

Family: Bucerotidae
Common Name: Wrinkled hornbill

AZA Management: Green Yellow Red None



NATURAL HISTORY:

Geographic Range: Europe Asia North America Neotropical
 Africa Australia Other [Click here to enter text.](#)

Habitat: Forest Desert Grassland Coastal
 Riverine Montane Other [Click here to enter text.](#)

Circadian Cycle: Diurnal Crepuscular Nocturnal Other [Click here to enter text.](#)

Cold Tolerance: To 70° F To 60° F To 50° F To 40° F
 To 30° F To 20° F Other Susceptible to frostbite

Heat Tolerance: To 30° F To 50° F To 70° F To 90° F
 To 110° F Other Birds can be misted in higher temperatures

Diet: Frugivore Carnivore Piscivore Insectivore
 Nectivore Omnivore Folivore Other (Add Below)

Captive Dietary Needs:
 Primarily frugivores; should be on a low Fe diet

Life Expectancy in the Wild: Males: unknown Females: unknown

Life Expectancy in Captivity: Males: Presently the oldest known male is 24 years (SB#44) Females: Presently the oldest known female is 23 years old (SB#23)

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BREEDING INFORMATION:

Age at Sexual Maturity: Males: SB#168 bred successfully at ~8 years of age. (n.b. younger males have bred, but NOT successfully). Females: SB#156 bred successfully at ~7 years of age. (n.b. younger females have bred, but NOT successfully; e.g. SB#183 had fertile eggs at ~3 years).

Courtship Displays: Courtship feeding; allo-preening

Nest Site Description: Nest in natural cavities

Clutch Size, Egg Description: 52.5-54.5 X 39.0-41.0 mm. (n=3)

Incubation Period: 30-32 days

Fledgling Period: 65-73 days(in literature); (83 days at Ft. Worth Zoo; 77-84 days at San Diego Zoo)

Parental Care: Incubation by female; male provides food to female and nestlings.

Chick Development:

These are notes from three parent reared birds hatched in 2013 at San Diego Zoo: (n.b. these notes were from the two older nestlings (SB#210, 211; both males), the youngest (SB#212, female) was about 2 weeks behind developmentally).

25d, feathers emerging on head, wing, tail
38d, taking food from male at nest entrance
43d, fully feathered
76d, fledged
96d, eating on own

Hand-reared--average age.
11d eyes slits
16d eyes open
70d, fledged

feathering notes from hand-reared birds: began emerging ~18d and opened ~41 on head, wings, tail.

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CAPTIVE HABITAT INFORMATION:

Social Structure in the Wild: During breeding season, occur in pairs; in non-breeding season can aggregate around fruiting trees in small flocks up to 30 individuals. Communal roosts.

Social Structure in Captivity: Preferably 1.1 birds; juveniles from previous breeding season should be separated from adults at ~8-10 months. (always monitor for possible aggression)

Minimum Group Size: 1.1 birds

Maximum Group Size: 1.1 plus fledged young

Compatible in Mixed Species Exhibits: Varies

Comments:

With selected pairs recommended to breed, no species should be added that might discourage breeding. Similarly, there exists a risk of aggression from hornbills directed to smaller bird species (especially in the breeding season).

Optimal Habitat Size: 20' X 24' X 14'

Management Challenges: No matter how compatible a pair might be, mate aggression may occur without warning. This species (in comparison to other hornbills) appears to be more susceptible to iron storage disease and should be on a low iron diet.

ADDITIONAL COMMENTS:

I recommend that all hornbill exhibits should have an adjacent (smaller) enclosure that can be used for introductions; facilitate catch up when needed; separation of pairs if aggression occurs; separation of fledged young as needed.

Kemp wrote in HBW (p.512): "One of the most habitat specific of Asian hornbills, requiring large tracts of tall lowland forest and not readily entering degraded habitat, this same habitat is the one most altered by human influence throughout the species' range."

Major Threat(s): Rates of forest loss in the Sundaic lowlands have been extremely rapid, owing partly to the escalation of illegal logging and land conversion, with deliberate targeting of all remaining stands of valuable timber including those inside protected areas. Forest fires have also had a damaging effect (particularly in 1997-1998). This species shows strong avoidance of degraded or secondary forests, and is therefore likely to be at increased threat.

Recently changed to the genus *Rhabdotorrhinus* (del Hoyo and Collar, 2014) (also see: <http://www.iucnredlist.org/details/22682514/0>)

Currently listed as Near Threatened (previously listed as Vulnerable); .

Conservation Actions: Conservation Actions Underway
CITES Appendix II.

Conservation Actions Proposed

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Conduct repeated surveys across the species's range to determine the magnitude of declines and rates of range contraction. Campaign for the protection of remaining tracts of lowland forest throughout the species's range.

REFERENCES:

Del Hoyo, J., Elliot, A., & Sargatal, J. eds. (2001): Handbook of the Birds of the World. Volume 6. Mousebirds to Hornbills. Lynx Edicions, Barcelona. 589pp.

del Hoyo, J.; Collar, N. J.; Christie, D. A.; Elliott, A.; Fishpool, L. D. C. 2014. HBW and BirdLife International Illustrated Checklist of the Birds of the World. Barcelona, Spain and Cambridge UK: Lynx Edicions and BirdLife International.

Galama, W., King, C. and K. Brouwer (2002): EAZA Hornbill Management and Husbandry Guidelines. 1st Edition. EAZA Hornbill TAG. National Foundation for Research in Zoological Gardens, Amsterdam

Kemp, A.C. (1995): The Hornbills. Oxford Univ. Press, Oxford, UK. 302 pp.

Kinnard, M.F. and Timothy G. O'Brien. (2007): The Ecology and Conservation of Asian Hornbills: Farmers of the Forest. University of Chicago Press. 315pp.

Kowalczyk, E. (2013): AZA regional studbook for birds in the genera Aceros, Rhyticeros, & Berenicornis, current thru 31 December 2013.

. Lindhom, J. H. (1999): The wrinkled hornbill, *Aceros corrugatus*. The AFA Watchbird XXVI (5): 55-62.

Poonswad, P., Kemp, A.C. & Strange, M (2013): Hornbills of the World: A Photographic Guide. Draco Publishing. 212 pp

Sigler, E.U. & Myers, M.S. (1992): Breeding the wrinkled hornbill *Aceros corrugatus* at the Audubon Park and Zoological Garden. International Zoo Yearbook 31: 147-153

<http://www.iucnredlist.org/details/22682514/0>

<http://www.birdlife.org/datazone/speciesfactsheet.php?id=965>

COMPLETED BY:

Name: Eric Kowalczyk (thanks to Nicole LaGreco (San Diego Zoo), who wrote the section on chick development)

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