Observations on the feeding habits of the Yellow-breasted Greenfinch *Carduelis spinoides* in Himachal Pradesh, India

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The Yellow-breasted Greenfinch *Carduelis spinoides* is a resident of the Himalayan region and is found throughout the entire mountainous range. Earlier studies indicate that the species feeds on a variety of seeds, and is particularly fond of wild hemp *Cannabis sativa* L. (Cannabaceae), sunflower *Helianthus annuus* L. (Asteraceae), buckwheat *Fagopyrum esculentum* Moench (Polygonaceae), rice *Oryza sativa* L. (Poaceae), ***etc***., and also berries, and insects (Ali & Ripley 2001; Anon. 2010; Rasmussen & Anderton 2012).

During our visits to Kinnaur, Himachal Pradesh, we observed this greenfinch feeding on two different plant species on two different dates in Chholtu village (31°31'N, 78°06'E; 1695 m MSL). On 10 June 2012, a small flock of six–eight birds was found feeding on the red-coloured sub-globose berries of *Daphne*

142—143. Yellow-breasted Greenfinch feeding on *Daphne mucronata* berries.

144—145. Yellow-breasted Greenfinch feeding on *Cannabis sativa* flower buds and flowers.

mucronata Royle (Thymelaeaceae) **[142–143]**, whilst on 18 July 2013, by which time the fruiting season of *D. mucronata* had almost come to an end, the birds were observed feeding on the flowers, and flower buds, of *C. sativa* **[144–145]**.

It was fascinating to observe Yellow-breasted Greenfinch in the course of feeding on *C. sativa* flowers and flower buds, but on the other hand, a major concern was the effect of the chemical composition of the flowers, specifically, the pistillate flowers of *C. sativa* which are rich in THC (Δ^9-tetrahydrocannabinol), a principal psychoactive constituent present to an extent of 10–12 percent in the plant (UNODC 2009).

THC is known to have moderate analgesic effects on humans (Elphick & Egertová 2001), and also act as an appetizer by enhancing palatability (Berry & Mechoulam 2002). But it is not known if feeding on its flowers has any consequences on the Yellow-breasted Greenfinch, similar to those observed in human beings. Therefore, it will be interesting to establish if the species preferentially feeds on hemp flowers and flower buds. Also, more studies may throw light on the effects of THC on the species.

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Reviews

Birds and people
By Mark Cocker & David Tipling

London: Jonathan Cape. 2013.

Hardback (22 x 28 cm), pp. 1–592.

Price: Rs. 2,999/-.

As bird books go, this whopping doorstopper took eight years in the making in which 600–800 people, from 81 countries, responded to the authors' invitation to contribute. The responses of 300 people were selected and woven into the mesmerising and encyclopaedic tapestry of Mark Cocker's lucid narrative. Stitched into its landscape are 350 spectacular photographs that David Tipling captured on visits to 39 countries on all seven continents (an enterprise worthy of a book in itself!). *Birds and people* covers 144 families of birds, of the over 200 families currently recognised, that encompass the world's 10,500 species (it does not cover 59 bird families).

So what kind of bird book is this, dedicated "to all those 650 contributors from 81 countries…?" "Birds," says Cocker, "are fellow travellers of the human spirit, and have also colonised our imaginations, as if we were one further habitat to conquer and exploit." This work then is an evocative summation of the "living lore of birds". "It is a sourcebook on why we cherish birds" (p. 10). The authors however, are quick to point out that it is far from exhaustive. To do justice to the subject, they say, would easily cover twenty such volumes (p. 11), for mankind and birds share a relationship that goes back in time, perhaps to the very advent of man. Much of this relationship must surely have been lost over aeons, but that which remains as our living lore of birds, is still an enormous storehouse of recorded culture. Yes, birds have indeed affected us so much that they exist as integral parts of all facets of our lives. *Birds and people* reveals how they feather our literatures, echo in our music, are icons of heraldry in our aggressions, hover in our mythologies, energise our visual arts, pepper our tongues, are food on our tables, ornament our vanities, and even terrorise our frailties.

This book is not so much about birds, as it is about us, and it is not so much about us, as it is about our relationship with these feathered bipeds. It is about how birds have entered our very spirits, at every conceivable level—aural, spiritual, mortal, immortal, physical, mental, victual, and practical. We have absorbed them into our life-streams so completely that we edify them as beacons of our emotions and character—fear, love, wonder, threat, aggression, horror, dominance, depression, joy, valour, grace, and desire, to name a few—even though we cannot, yet, understand those of the birds themselves.

When one writes the history of human civilisation from the point of view of mankind's interactions with birds, the canvas is immense, stretching into the foggy realms of myth, legend, and prehistory. Multifarious aspects of this imbibing, of bird by man, are explored in *Birds and people*. It provides an ever-expanding vista of this human-centric relationship, opening innumerable leads into mythology, history, fable, literature, song, film, and art, covering realms at once personal, as well as encompassing the myriad human communities in the world, in an apparently unending journey of discovery, and celebration of our obsession with birds. The text rejoices with glorious poetry, like D. H. Lawrence's