

Symposium 35 Bird minds

Introduction

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Higher cognition is one of the more controversial fields in avian research. This symposium presents results of new laboratory and field research in this area, showing that characteristics usually associated with the great apes are present in birds, and thus present without an increase in brain size or a neocortex. These findings suggest that some avian species do not merely respond to effects but are capable of planned action and intentional communication.

The speakers cover a substantial range of behaviors once thought to be unique to humans. Giorgio Vallortigara discusses the very topical issue of spatial cognition and learning of abstract rules in birds, based on the domestic chicken as a model. Irene Pepperberg analyses processes of acquisition of language in grey parrots. Gisela Kaplan discusses alarm calls of the Australian magpie showing that

they may use referential alarm calling for predators. Martine Hausberger and colleagues have proved experimentally that social conditions in raising starlings influence vocalizations, perception and even neuronal selectivity in the brain. Gavin Hunt and Russell Gray provide evidence of sophisticated manufacture of tools by New Caledonian crows, now among the very few confirmed examples of the manufacture of tools by animals.

Evidence of use of referential communication, complex learning, manufacture of tools and problem-solving in avian species suggests that it may no longer be possible to dismiss these cases as rare. We may need to consider that these traits demonstrate higher cognitive abilities approaching, perhaps even rivaling, those of primates.