



## **Action in dim light: sensory and neural adaptations in nocturnal ants**

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Several ant species restrict their activity to brightly lit periods during the day where visual information is reliable. Ants, despite their tiny size, relatively small brains and few neurons, are highly competent visual navigators. A significant number of ants, however, are active in dimly lit environments, including animals that forage in the dark confines of the leaf-litter, in closed canopy rain forests, or at night. In dim-light habitats, the visual signal-to-noise ratio is typically low, which makes detecting reliable visual navigational information a challenge. Here, we will present the optical and physiological adaptations that ants have evolved for being efficient visual navigators in dim-light. Ants are also unusual in having castes that have different locomotory needs: exclusively pedestrian workers and exclusively flying males. This gives us an opportunity to pinpoint both optical and neural adaptations required for life at night and life on the wing.?