

## Abstract

The responses of (i) groups of crowd-reared mature males of desert locust, *Schistocerca gregaria* to a choice of two columns of air, one permeated with different concentrations of phenylacetonitrile (PAN), the major component of gregarious-phase male-produced pheromone, and the other untreated, and (ii) individual crowd-reared mature males of the insect to varying concentration gradients of PAN, were studied in two different types of arena. In the choice assay, locusts preferred to be within PAN-permeated air column at low relative doses of the pheromone, but away from PAN at high relative doses. In the second assay, individual locusts were arrested close to PAN source at low PAN concentration gradients, but away from the source at high concentration gradients. The results are consistent with two reported releaser functions of the adult male-released pheromone that are dependent on different sensory thresholds: arrestment and cohesion at lower relative concentrations and male-male homosexual avoidance at higher relative concentrations.