Bioassays have shown that sand freshly contaminated by ovipositing females of the gregarious desert locust *Schistocerca gregaria* (Forskal) is more effective in inducing further oviposition from conspecifics than contaminated sand stored for three or six months, which contrasts with results obtained previously with *Locusta migratoria* (Reiche & Farmaire). The activity of contaminated sand correlated with the levels of three unsaturated aliphatic ketones, (*Z*)-6-octen-2-one, (*E*,*E*)-3,5-octadien-2-one and its geometric isomer (*E*,*Z*)-3,5-octadien-2-one present in the volatile emissions from the sand.