HAMADAH AL HAMRA AND DAR AL GANI: A COMPARISON OF TWO METEORITE FIELDS IN THE LIBYAN SAHARA. A. E. Abu Aghreb[1], A. M. Ghadi[1], J. Schlüter[2], L. Schultz[3] and F. Thiedig[4], [1]Industrial Research Center (IRC), Geol. Res. and Mining Dept., Tripoli, Libya, [2]Mineral. Museum, Univ. Hamburg, D-20146 Hamburg, Germany, [3]MPI für Chemie, D-5520 Mainz, Germany, [4] Univ. Münster, D-48149 Münster, Germany.

Introduction: Most meteorites found in the Libyan Sahara are from two main areas: Hamadah al Hamra (HaH) and Dar al Gani (DaG). Some of the meteorites from the HaH are known under the name Daraj. The geological setting of the DaG meteorite field has been described in [1] and an update is given in [2]. In this contribution we compare both meteorite fields, HaH and DaG. Some basic facts are given in Table 1. The morphology of both regions is similar. Both plateaus originate from Tertiary marine sediments, which are eroded to a cm-sized, even-grained limestone grid. The content of fine grained quartz sand is higher at the HaH as compared to DaG. While DaG has almost no permanent plants, the HaH – closer to the Mediterranian Sea - seems to receive more rain or moisture, which results in some sparse vegetation. No lunar or SNC meteorite has ever been found on the HaH, and the number of recovered achondrites is small.

	Dar al Gani	Hamadah al Hamra
Total area [km^2]	12 000	50 000
Area with meteorites [km^2]	5 500	16 000
Total No. of meteorites	972	362
Total mass [kg]	759	277
No. of known strewnfields	>26	>3
Typical mass range [g]	50 –100	75 – 200
Meteorites/km^2	0.18	0.023

Table 1: Comparison of two meteorite fields of the Libyan Sahara, Dar al Gani and Hamadah al Hamra.

Discussion: The recovery density of HaH is much smaller than that of DaG. This may have several reasons: (1) Meteorite searches were more intense at the DaG. The generally higher mass of HaH meteorites point to such an effect. (2) The recovery conditions are better at the DaG compared to HaH. (3) Conditions of meteorite preservation are better at DaG. With a few exceptions, terrestrial ages of Daraj meteorites are < 10 ka [3]. Those of DaG chondrites tend to have ages > 10 ka [4]. This implies that destruction of meteorites by weathering processes are faster at HaH than at DaG.

References: [1] J. Schlüter et al. (2002) *Meteorit. Planet. Sci., 37,* 1079-1093. [2] A. M. Ghadi (2003) *Meteorit. Planet. Sci., 38* (this volume). [3] A. J. T. Jull et al. (1990) GCA 54, 2895-2898. [4] K. C. Welten et al. (2003) *Lunar Planet. Sci. XXXIV*, Abst.# 1866.