METEORITE RECOVERY ON DRY LAKES – FOLLOW THE ICE-RAFTS. R. S. Verish[1], [1]Meteorite Recovery Foundation, P.O. Box 237, Sunland, CA 91040.

Introduction: This paper reports on preliminary findings for a method of meteorite recovery, which utilizes recognized natural processes that have been shown to accumulate rocks upon stranding surfaces on and about dry lakes [1]. These processes are not completely understood, but they are well studied [2]. Other studies have recognized dry lakes as being excellent areas for finding numerous unpaired meteorites [3]. But this current, on-going group effort goes farther, not only by gathering evidence for natural mechanisms capable of transporting and concentrating specimens, but by utilizing this knowledge to pinpoint certain, select stranding surfaces, and then to effect a successful meteorite recovery.

Discussion: In personal correspondence (1999) Paul Gessler presented to me evidence of unusual concentrations of meteorite finds that he was recording from a locality now known as Bluewing. It was his opinion that ice-rafting/moving water was involved in producing these sporadic accumulations of detritus and meteorites. In a meeting with G. J. MacPherson the following year (2000), I presented to him the evidence that Paul Gessler had documented. It was MacPherson's opinion that more persuasive evidence would be required to rule out that these dry lake finds were not being washed down the alluvial fans and out onto the surface of dry lakes.

The first area to be intensely studied by organized group effort was Cuddeback Dry Lake, followed by Silver Dry Lake. In both areas the majority of finds were made along the NE margin of these playas, suggesting that wave action driven by the prevailing SW-NE wind may be implicated in these accumulations. But the proximity of the finds to nearby drainage sources made this evidence far from compelling and more likely a coincidence. Additional circumstantial evidence came from the find locations for Rabbit Dry Lake, El Mirage Dry Lake and Tungsten Mountain. But it wasn't until another group effort at Superior Valley started to recover meteorites high up on southern shorelines, did the idea present itself of winter storms blowing from the north, and countering the prevailing wind direction. On the morning of 01/19/01 it was observed that such a situation had occurred, giving us confidence that over geologic time, this could be a process capable of transporting and concentrating meteorites onto a north-facing shoreline. Within the next 6 weeks, Rob Matson had recovered 7 chondritic stones from this same Superior Valley shoreline. Since then, five other similar dry lakes, previously searched without success, have been revisited. And with this accumulation mechanism in mind, a purposeful and concentrated search of northerly-facing shorelines was conducted. Three of these dry lakes had meteorites recovered on the predicted shorelines on their very first "return visit". Since this is an on-going study, only Red Dry Lake (and all the above meteorites) has had the opportunity to be reported in the Meteoritical Bulletin, No.86, 2002 July. As stated previously, these are preliminary findings, but more will be forthcoming after their nomenclature has been approved.

Conclusion: The recovery of meteorites from desert dry lakes can be aided through a cursory review of regional/year-long weather patterns, and a close study of topographic maps. On dry lakebed surfaces, close attention should be paid to the preferred directions of "sliding rock" tracks, and scratch marks from "dragged branches", as a result of "ice-rafting". All of this is more conducive for deflating surfaces that are at higher elevations and/or at higher latitudes.

References: [1] Gessler N. et al (2002) *Meteorit. Planet. Sci., 37*, this issue. [2] Messina P. Stoffer P. (2001) *Calif. Geology, 54*, p4. [3] Rubin A. E. et al (2000) *Meteorit. Planet. Sci., 35*, A181