"The random deployment of 30 pan traps on a grid across the 1-ha Silverbell site poorly represented the abundant and rich native bee fauna that visited creosote bush in the spring of 1998. The bee fauna sampled by net at the Silverbell site in the spring of 1998 was representative of samples netted at that hectare of *Larrea* in the previous four years, as well as at different 1-ha sites scattered throughout the Upper Sonoran Desert."

"Pan traps missed nearly all of the *Larrea* specialists, three of which were abundant at flowers. In contrast, no regular *Larrea* visitor was missed by net sampling but caught in a pan trap. Several ecological and behavioral factors may explain the poor correspondence of pan and aerial net samples of bees at the Silverbell site."

"It may be that bees only encounter pan traps if they are placed at the same height as their preferred bloom. At the Silverbell site, a pan height of one meter would have placed pans at a suitable height with bloom. There is evidence that bee species tend to forage in a horizontal stratum which can influence the bee species that are trapped, The effect is most obvious in comparisons of bee faunas of tree canopies and underlying forest floor. If strata generally matter, then pan traps placed on the ground will under-represent bees foraging in tall forbs, shrubs and trees. Such a problem could be rectified by placing pan traps at the height(s) of the flowering plants that are being visited by bees."

"A second and likely possibility is that pan traps are less attractive to foraging bees than are flowers, such that the catch in pan traps is inversely proportional to the availability of bloom (F. D. Parker, pers. comm.). Our sample site was producing prodigious bloom on the date of our sample, when pan trapping yielded a poor representation of the fauna. If pan-trapping success depends inversely upon extant bloom, then pan trap data will be difficult to interpret except under circumstances when suitable host bloom is lacking (e.g. habitats without flowers, seasons without flowers, bees flying in advance of bloom, etc.). In this case, pan-trapping could complement net-sampling, but during bloom, would be no substitute for net-sampling."

From: Cane, J. H., R. Minckley and L. Kervin. 2001. Sampling bees (Hymenoptera: Apiformes) for pollinator community studies: pitfalls of pan-trapping. J. Kansas Entomological Society 73: 208-214.