its selected mate, stretched and fanned the wing towards the female and sniffed her. The female always attempted to repel from the male by screaming and leaving the branch of the tree. However, the male followed her persistently for about 20–45 min till he copulated successfully. Although the female attempted to evade the male and did not appear to be receptive, the male followed persistently and approached the female from the rear silently by gripping the scruff of the female's neck in his teeth while holding her with his thumbs. During the copulation the female tried to release herself from the male using force and screams. However, the male never released his grip on the female until the copulation sequence was complete. When the female released herself from the male successfully, she was followed by the male who produced loud audible vocalization. After the copulation, both individuals were silent for the rest of the day. Copulation lasted for about 30–40 s. One way completely randomized ANOVA emphasized that the number of copulations at 1500 h was statistically more ($F_{9,10} = 15.6$; $P < 0.001$) compared to the rest of the day. The number of copulations under cloudy, dim sunlight was significantly more ($t = 2.91$; 9 *df*; $P < 0.005$) when compared to copulation under bright sunlight.

Grant[5] reported the mating screams during night hours at the mating season of *P. tonganus* in Samoa; however, no observatory evidence was available for this species. The effect of environmental factors like temperature in the bat roosting site on specific reproductive events was described in detail by Racey[12]. Moghe[13] found the spermatozoa in the lumen and uterus of the flying foxes in the late August and early September in Western India. He also described that the gestation period of flying foxes was believed to be 140–150 days and the parturition was taking place in early February. Even though we have not observed the act of parturition, it might also be synchronous, since the copulations that we have observed were so highly synchronized.

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Random selection

revisited

'Mean-field cluster model for the critical behaviour of ferromagnets'
Ralph V. Chamberlin
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About a hundred years ago, magnetism came to be partly understood on the basis of Curie's theory of paramagnetism, Langevin's theory of diamagnetism and Weiss' theory of ferromagnetism. Weiss' contribution to the then existing theories was introduction of 'molecular field' to take into account the strong interactions between atomic magnetic dipoles. Subsequently, Curie–Weiss' law got established which accounted for temperature dependence of ferromagnetic susceptibility. The mean-field theory of Weiss, however, could not explain the behaviour of ferromagnetic materials at very low temperature and near the ferro-para critical temperature. Over the years 'critical scaling theory' and 'cluster models' based on single cluster size have sought to improve Weiss' theory but with moderate success over limited ranges of temperature.

The paper cited here relaxes the cluster size restriction. In the words of the author, Chamberlin, 'here I consider clusters with unrestricted sizes, but use a mean-field expression for interactions between the clusters. . . . I use a mean-field cluster model based on finite size thermostatics to extend the range of mean field theory, thereby eliminating the need for a separate scaling regime'. The outcome is that the model provides results that match measured susceptibilities of several crystalline ferromagnets remarkably well even in the paramagnetic region thus 'providing a unified picture of both the critical scaling and Curie–Weiss' regimes'.