Title:	Coping with the ‘Indian summer’: unique nesting cycle and nest architecture of the paper wasp Polistes wattii.
Authors:	Songara, Pratibha (/jspui/browse?type=author&value=Songara%2C+Pratibha) Malhotra, Kunika (/jspui/browse?type=author&value=Malhotra%2C+Kunika) Gupta, Manisha (/jspui/browse?type=author&value=Gupta%2C+Manisha) Kaur, Rajbir (/jspui/browse?type=author&value=Kaur%2C+Rajbir) choudhury, RhitobanRay (/jspui/browse?type=author&value=choudhury%2C+RhitobanRay)
Keywords:	Coping with the ‘Indian summer’ unique nesting cycle nest architecture of the paper wasp, Polistes wattii
Issue Date:	2022
Publisher:	Springer Nature
Citation:	Science of Nature, 109(3), 31.
Abstract:	Polistes is one of the most widely distributed and extensively studied primitively eusocial wasps. Based on where they are found, there are two established nesting cycles in this genus. The temperate wasps follow an annual cycle with diapause in winter while the tropical wasps of South America can initiate nests any time of the year and do not hibernate. Additionally, some subtropical Polistes are known to form nest free aggregations during the cold, dry, unfavorable season. Although several species of Polistes wasps are found in India, our knowledge about their biology is pitifully small and is restricted to taxonomic reports. Here, we report the unique nesting cycle of Polistes wattii, a wasp abundantly found in north India and other Asian countries. P. wattii hibernates in winter as well as forms nest-free aggregations in the dry summer season and thus has a nesting cycle with two inactive periods, which no other Polistes is known to follow. The study site in North India experiences short, cold, snow-free winters, spring, a very dry early summer, and humid late summer with intermittent rain. We found that P. wattii here shows several unique adaptations to survive the long Indian summer where it shows two rounds of nest-founding in the same year, once as overwintered, solitary foundress in spring and once with multiple foundresses during summer. To meet the demands of expanding colony in late summer, P. wattii often adds multiple combs to their nest, which are architecturally different from the multiple comb nests reported from neotropical regions and strikingly different from all temperate Polistes who make only single comb nests. This study investigates the nesting biology and natural history of P. wattii to understand how they maximize survival and fitness.
Description:	Only IISERM authors are available in the record.
URI:	https://doi.org/10.1007/s00114-022-01801-0 (https://doi.org/10.1007/s00114-022-01801-0) http://hdl.handle.net/123456789/4757 (http://hdl.handle.net/123456789/4757)
Appears in Collections:	Research Articles (/jspui/handle/123456789/9)

Need To Add…Full Text_PDF. (/jspui/bitstream/123456789/4757/1/Need%20To%20Add%e2%80%a6Full%20Text_PDF.)	15.36 kB	Unknown	View/Open (/jspui/l

Show full item record (/jspui/handle/123456789/4757?mode=full)

(/jspui/handle/123456789/4757/statistics)