



Nest plant selection of the Andaman Crake *Rallina canningi*, Andaman Islands, India

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The Andaman Crake *Rallina canningi*, is a rare and endemic bird to the Andaman Islands (Collar et al. 1994; Stattersfield et al. 1998; Vijayan et al. 2000, 2005). This bird retained under the category of Near Threatened (BirdLife International 2008), inhabits marshland inside the forests (Taylor & Perlo 1998). There is paucity of information on the breeding biology of the Andaman Crake (Ali & Ripley 1969; Taylor & Van Perlo 1998; BirdLife International 2001) except for the records of nests, eggs (Baker 1934) and casual observations (BirdLife International 2001). Hence, a study was conducted on the breeding biology of the Andaman Crake.

Study Area: Andaman and Nicobar Islands form a major group of oceanic islands in the Bay of Bengal, India, located between 6°5'-14°45'N & 92°-94°E. Andaman Islands comprise north, middle, south and little Andaman (Das 1999; Das & Palden 2001).

Our intensive study was at Pathilevel in North Andaman, where the main forest type is moist deciduous with irregular top storey of predominantly deciduous trees which grow to 40m or more harbouring woody climbers. The second storey consists of numerous species with shrubby evergreen undergrowth of *Licuala peltata*, where the major tree species were *Pterocarpus dalbergioides*, *Terminalia bialata*, *Bombax insigne* and *Tetrameles nudiflora*.

Methods: Nests were located and studied following Martin & Geupel (1993) and Martin et al. (1997) during May-October 2005-2006. Ilev Index of selectivity (1961) - $E = U-A/U+A$, where U is percent utilization of species and A percent availability of the same species was used. Selectivity levels range from -1 to +1, where (-) indicates avoidance while (+) indicates preference. Mann-Whitney U test (Zar 1999) was used to compare nest-plant character with non-nesting plant.

Results and Discussion: Table 1 presents the details of 155 nests on 151 plants belonging to 21 species and 12 families. All nests except three were found on the live plants (two on dead *Terminalia catappa* (Combretaceae) and one on dead *Bouea oppositifolia* (Anacardiaceae). Four species, *Terminalia nudiflora* (Thipok), *Pterocarpus dalbergioides* (Padauk), *Terminalia bialata* (White chugulam) and *Pterygota alata* (Lakko) accounted to 72.12% while 17 other species together contributed 27.81% of nest trees.

The preference test showed that Andaman Crake had a higher choice for five species, i.e. *Tetrameles nudiflora* ($E=0.84$), *Pterocarpus dalbergioides* ($E=0.63$), *Terminalia bialata* ($E=0.53$), *Pterygota alata* ($E=0.83$) and *Celtis timorensis* (Thejpathi) ($E=0.68$), while they avoided 13 species, i.e. *Spondias pinnata*, *Terminalia manii*, *Endospermum diadenum*, *Bombax insigne*, *Pongamia pinnata*, *Syzygium samarangense*, *Dillenia indica*, *Parishia insigni*, *Pterospermum acerifolium*, *Bouea oppositifolia*, *Lanea coromandelica*, *Miliusa tectona* and *Celtis timorensis*.

The nesting sites of the Andaman Crake were closer to the water source, placed mostly at the bottom of huge trees. Nest plant variables were compared with non-nesting plants and significant differences were recorded in GBH of the nesting tree. The GBH of the nesting tree was greater than non-nesting tree ($U=171.5$, $p<0.05$) and number of buttresses were comparatively more in nesting tree than non-nesting tree ($U=12$, $p<0.05$).

Of the 21 species of trees observed, *Tetrameles nudiflora* and *Pterocarpus dalbergioides* with bigger and more buttresses and architectural suitability were the most preferred nesting trees as observed by Das (2008).

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Table 1. Nest plant species utilized by the Andaman Crane

Tree Name	Family	No. of plants with nest	% of use	E
<i>Spondias pinnata</i>	Anacardiaceae	1	0.66	-0.27
<i>Terminalia manii</i>	Combretaceae	2	1.32	-0.47
<i>Endospermum diatenum</i>	Euphorbiaceae	1	0.66	-0.91
<i>Bombax insigne</i>	Bombacaceae	7	4.64	-0.35
<i>Pongamia pinnata</i>	Fabaceae	2	1.32	-0.41
<i>Syzygium samarangense</i>	Myrtaceae	1	0.66	-0.76
<i>Dillenia indica</i>	Dilleniaceae	2	1.32	-0.90
<i>Pterygota alata</i>	Sterculiaceae	18	11.92	0.86
<i>Parishia insigni</i>	Anacardiaceae	1	0.66	-0.82
<i>Pterospermum acerifolium</i>	Sterculiaceae	1	0.66	-0.66
<i>Bouea oppositifolia</i>	Anacardiaceae	2	1.32	-0.84
<i>Lansea coromandelica</i>	Anacardiaceae	1	0.66	-0.80
<i>Pterocarpus dalbergioides</i>	Fabaceae	34	22.52	0.63
<i>Ficus amottiana</i>	Moraceae	1	0.66	0.18
<i>Miliusa tectona</i>	Annonaceae	3	1.99	-0.12
<i>Celtis timorensis</i>	Ulmaceae	9	5.96	0.68
<i>Tetrameles nudiflora</i>	Tetramelaceae	37	24.50	0.84
<i>Terminalia bialata</i>	Combretaceae	20	13.25	0.53
<i>Diospyros crumenata</i>	Ebenaceae	1	0.66	-0.16
<i>Terminalia catappa</i>	Combretaceae	5	3.31	0.41
<i>Canarium euphyllum</i>	Burseraceae	2	1.32	0.32

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