MANTID FAUNA OF CHANDOLI NATIONAL PARK, MAHARASHTRA, INDIA

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INTRODUCTION
Mantids belonging to the top predators of the arthropoda community. They play valuable role in checking the number of some insects group and form an order of exclusively carnivorous insects, living solitarily in the vegetation or more rarely on the ground. They ambush insects, spider and occasionally even small vertebrates (Prete et al., 1999).

There are approximately 2300 species known worldwide (Ehrmann, 2002), occurs in almost all tropical and semitropical habitats but rarer in colder climate regions. India has a moderately diverse fauna of mantids with 162 species under 68 genera and 6 families (Mukherjee et al., 1995). Out of 162 species 52 species of mantids are known to occur in Maharashtra (Ghate and Ranade, 2002).

The abundance and variety of the mantid in Maharashtra always attracted the attention of entomologists. Several entomologists published important articles that described and identified many of the species of Maharashtra (Nadkerny, 1965, 1974; Mukherjee and Hazra 1983; Chaturvedi et al., 2000; Ghate et al., 2000, 2001; Ghate and Ranade, 2002; Sureshan et al., 2004 and Jadhav et al., 2006).

The study proved that the mantid fauna of Chandoli national park is very rich but not explored fully. Being an active predatory insect of fascinating group of animals. They play a vital role in the natural control of insects.

The objective of this study is to contribute to the knowledge of biodiversity of praying mantid in Chandoli national park.

MATERIALS AND METHODS
Chandoli national park is one of the largest national park in India. The area of the Chandoli national park is 317.67 km² and lies between latitudes 73°40’E and 73°53’ E and 17°53’N and 17°30’N. Total annual rainfall is recorded as 3,500 mm at the dam site and gradually increasing to 6,000 to 4,000 mm at the creast line.

The collection was made from 2008 to 2009 using insect net or were hand picked. Species preferring dens shrubby, bushes in plains and hills. They were collected during late evening and in the night. The collected specimens were preserved by dry/ wet preservation method. The specimen were measured in mm and identified according to Mukherjee et al., (1995), Vyjayandi (2007). Some identification was confirmed by Dr H.V. Ghate.

RESULTS AND DISCUSSION
During present study in Chandoli national park, the order Mantodea is represented by 11 species belonging to 11 genera 7 subfamilies and 3 families. Among these, family Mantidae is represented by 7 species (Humbertiella ceylonica Saussure, Hierodula ventralis Giglio-Tos, Mantis religiosa inornata Werner, Tenodera aridifolia Stoll, Statilia maculata Thunberg, Schizocephalus bicornis Linnaeus and Toxoderopsis taurus Wood-Mason) and formed to be dominant in the study region, followed by families Hymenopodidae and Empusidae (2 species each).

ABSTRACT
A year-long survey was conducted to assess the mantid species assemblage in various natural and anthropogenic habitats of Chandoli National park. Total of 11 Mantid species belonging to 11 genera, 7 subfamilies and 3 families were recorded. The family Mantidae (7 species) was found to be dominant in the study region, followed by families Hymenopodidae and Empusidae (2 species each).

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The existence of 11 species from Chandoli national park, it can be very safely said that the diversity of Mantid of this region is considerably rich. This is also evident from some earlier works carried out on the Mantid fauna of the region. Mukherjee et al., (1995) who reported 14 genera and 17 species of Mantid from Maharashtra. There is also a list of 11 Mantid species from Sanjay Gandhi National Park, Mumbai (Chaturvedi et al., 2000). Jadhav et al., (2006) recorded 19

**Family- Empusidae**

**Subfamily - Empusinae**

1) *Gongylus gongylodes* (Linnaeus): (Fig. 1)

1758. Gryllus (Mntis) gongylodes Linnaeus Syst. Nat. 10: 426
1767. Mantis gongylodes Linnaeus Syst. Nat. 2(10): 610
1793. Mantis flabelicornis Fabricius Entomol. Syst. 2:16

1927. Gongylus gongylodes Giglio-Tos Das Tierreich. 50: 635
Material examined: 1 male, 17xii 09, Ambaiwada (Lat-17.1168 and Lon-73.8524)
CNP, Kolhapur District, Coll. Y.J. Koli
Distribution: India- Andhra Pradesh, Kerala, Maharashtra, Tamil Nadu, Orissa, West Bengal, Indonesia and Sri Lanka
Measurements: BL-78 mm, PL-42 mm, FC-22 mm and FF-15 mm
Remarks: Earlier reported from Maharashtra from SGNP

2) *Empusa guttula* (Thunberg): (Fig. 2)

Material examined: 1 female, 9.i.10, Ambaiwada (Lat-17.1168 and Lon-73.8524)
CNP, Kolhapur District, Coll. Y.J. Koli
Distribution: Maharashtra, Orissa.
Measurements: BL-55 mm, PL-25 mm, FC-13 mm and FF-15 mm
Remarks: Earlier reported from Maharashtra from Pune collected by Ghate and Ranade, 2002

**Family- Hymenopodidae**

**Subfamily- Acromaninae**

1) *Euantissa pulchra* (Fabricius) : (Fig. 3)

Material examined: 1 male, 1.iii.10, Niwale (Lat-17.1176 and Lon-73.8089)
CNP, Kolhapur District, Coll. Y.J. Koli
Distribution: India- Kerala Maharashtra, Eastern and North Eastern India and Sri Lanka.
Measurement: BL-25mm, PL-11mm, FC-06mm and FF-07mm
Remarks: Very common and widely distributed species.

**Subfamily: Hymenopodinae**

2) *Creobroter apicalis* (Saussure): (Fig. 4)

Material examined: 1 female, 25.vi.08, Khundlapur (Lat-17.1749 and Lon-73.8776)
CNP, Sangli District, Coll. Y.J. Koli.
Distribution: India- Assam, Kerala, Karnataka, Maharashtra, Manipur, Meghalaya, Orissa, Sikkim and West Bengal.
Measurement: BL-21mm, PL-07mm, FC-07mm and FF-09mm
Remark: Yellow spot on fore wing.

**Family-Mantidae**

**Subfamily-Liturgusinae**

1) *Humbertiella ceylonica* (Saussure): (Fig. 5)

Material examined: 2 female, 1 male, 19.vii.08, 17.xii.09, 1.iii.10 Ambaiwada (Lat- 17.1168 and Lon-73.8524)
CNP, Kolhapur District. Coll. Y. J. Koli
Distribution: India- Assam, Bihar, Karnataka, Madhya Pradesh, Tamil Nadu, Uttar Pradesh, Kerala, West Bengal, Maharashtra, Myanmar and Sri Lanka.
Measurement: BL-29 mm, PL-07 mm, FC-08 mm and FF-10 mm
Remark: Very common Bark Mantid.

**Subfamily-Mantinae**

2) *Hierodula ventralis* (Giglio-Tos) : (Fig. 6)

Material examined: 1 female, 02.vi.08, Zolambi (Lat-17.2032 and Lon 73.8326 )
CNP, Satara District. Coll. Y. J. Koli.
Distribution: India- Chandigarh, Kerala, Madhya Pradesh, Maharashtra and Orissa.
Measurement: BL-72 mm, PL-19 mm, FC-15 mm and FF-19 mm
Remark: Very common seen along green vegetation.

3) *Mantis religiosa inornata* (Werner): (Fig. 7)

2002. Mantis religiosa inornata Werner in. Ehrmann, Mantoeda, 216
Material examined: 1 male, 22. v. 09, Ambaiwada (Lat-17.1168 and Lon-73.8524)
CNP, Kolhapur District. Coll. Y. J. Koli
Distribution: India- Maharasthra, Orissa and Uttar Pradesh.
Measurement: BL-60 mm, PL-11 mm, FC-12 mm and FF-15 mm
Remark: Very common seen among green vegetation.

4) *Tenodera aridifolia* (Stoll): (Fig. 8)

1813. Tenodera aridifolia Stoll
1869. Tenodera aridifolia angustipennis Saussure
1871. Tenodera aridifolia siensis Saussure
1933. Tenodera aridifolia brevicillis Beier
Material examined: 1 male, 14. v. 09, Ambaiwada (Lat-17.1168 and Lon-73.8524)
CNP, Kolhapur District. Coll. Y. J. Koli
Distribution: India-Andhra Pradesh, Arunachal Pradesh and Maharashtra.
Measurement: BL-77 mm, PL-30 mm, FC-15 mm and FF-17 mm
Remark: This species is very common in Western India.

5) Statilia maculata (Thunberg): (Fig. 9)
1784. Mantis maculata Thunberg Nov.Ins Spec., 3:61
1927. Statilia Hanii Giglio-Tos Das Tierrech.50:237
Material examined: 2 male, 1 female. 02. vi. 08, 12viii.08, 09.xii.09 Niwale
(Lat-17.1176 and Lon-73.8089) CNP, Kolhapur District. Coll. Y. J. Koli
Distribution: India- Andhra Pradesh, Arunachal Pradesh, Assam, Bihar, Himachal Pradesh, Madhya Pradesh, Maharashtra, Meghalaya, Sikkim, Uttar Pradesh and West Bengal.
Measurement: BL-94 mm, PL-31 mm, FC-15 mm and FF-20 mm
Remark: Widely distributed species

Subfamily: Schizocephalinae

6) Schizocephalus bicornis (Linnaeus): (Fig. 10)
1758. Grillus (Mantis) bicornis Linnaeus Syst.Nat.,1(10) : 426
Holotype :india
1781. Mantis oculata Fabricius Spec.Ins.,1 :348
1927. Schizocephalus bicornis Giglio-Tos Das Tierreich., 50:237
Material examined: 2 male, 1 female. 02. vi. 08, 12viii.08, 09.xii.09 Niwale
(Lat-17.1176 and Lon-73.8089) CNP, Kolhapur District. Coll. Y. J. Koli
Distribution: India- Andhra Pradesh, Arunachal Pradesh, Assam, Bihar, Himachal Pradesh, Madhya Pradesh, Maharashtra, Meghalaya, Sikkim, Uttar Pradesh and West Bengal.
Measurement: BL-41 mm, PL-14 mm, FC-09 mm and FF-12 mm
Remark: Block line in front of claw groove. Common species in India

Subfamily: Schizocephalinae

7) Toxoderopsis taurus (Wood-Mason): (Fig. 11)
1927. Toxoderopsis taurus Giglio-Tos Tierrech., 50:569
Material examined: 1 female, 14. xi. 10, Khundlapur (Lat-17.1749 and Lon-73.8776) CNP, Sangli District. Coll. Y. J. Koli
Distribution: India- Kerala, Maharashtra and Orissa.
Measurement: BL-75mm, PL-30mm, FC-11mm and FF-15mm.
Remark: Very common species in Maharashtra.

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REFERENCES


