ANTHROPOGENIC PRESSURES ON GREY JUNGLEFOWL (*GALLUS SONNERATII*) HABITATS AT GUDALUR RANGE IN THENI FOREST DIVISION, WESTERN GHATS, TAMIL NADU

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Introduction

The main cause of destruction and degradation of forests is poverty among the people who live in and around forests and are dependent on the forest lands for their basic needs. It is true that the problems in wildlife conservation are intricately related to the quality of life of the local people. Apart from this, developmental activities such as plantations and hydro-projects, poaching, mining and forest fires are threats to forest wealth. Unless these problems are resolved, efforts to ensure wildlife conservation can hardly succeed in India.

Johnsgard (1986) mentioned that the Grey junglefowl inhabits a wide variety of habitats such as evergreen forests, sholas, riverine and scrub forest but mostly shows a preference for mixed bamboo jungle in the neighbuorhood of forest villages and their associated cultivations. White and Garrot (1990) stated that habitat requirement is a critical facet of many wild animals. Dowell *et al.* (1993) emphasized the importance of knowing the detailed habitat requirements in order to develop an effective conservation strategy for protecting a wild game bird species. There has been close relationship among Galliformes and humans. The Galliformes are terrestrial species and are easily captured by man for meat. The egg of this species provides good source of protein. The family Phasianidae is highly affected by man in South-East Asia (McGowan and Gillman, 1997).

Anthropogenic pressures are one of the major problems in the country affecting forest cover. Livestock grazing, collection of Non-Timber Forest Produce (NTFP), firewood and leaf litter collection have caused degradation of forest by over-exploiting the critical micro-habitats that are preferred by Grey junglefowl (*Gallus sonneratii*) for feeding, resting and breeding. People's participation in protecting natural resources is a part of the National Forest Policy (1988) of India. This strategy is also referred to as People's Participation/Community Participation/ Joint Forest Management.

Cattle and other domesticated livestock inside protected areas have been

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the *bete noir* of many ecologists, environmentalists and wildlife preservation managers. Cattle grazing is the major problem that Indian wildlife and the National Parks and Sanctuaries face today (Sankhala, 1985; Lalitha and Gokula, 1999; Lalitha *et al*., 1999). The Indian Board for Wildlife, in its recommendations on Wildlife Sanctuaries in 1965, wrote that as far as possible, grazing of domestic animals in sanctuaries should be prohibited (Gee, 1967).

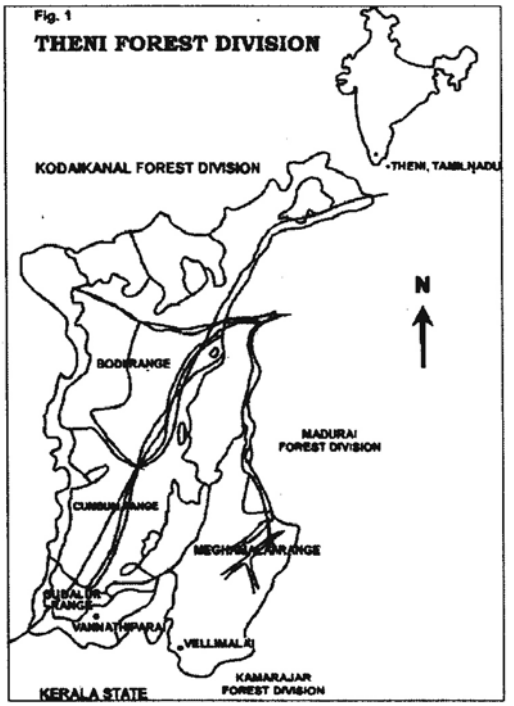
The objective of the present study was to identify and assess the anthropogenic pressures such as livestock grazing, NTFP and firewood collection at Gudalur Range in Theni Forest Division and their impacts on Grey junglefowl.

Study Area

Forest settlements, namely Vumaiyan Thozhu, Parai Thozhu and Paliyar Kudisai and villages namely Kullappa Goundanpatti and Gudalur were selected in the present study to assess the anthropogenic pressure.

Gudalur Range (23 km^2) is located at 9^o 37'N lat., 77^o 16' E long. in the southern Western Ghats of Theni Forest Division (723 km^2), Theni District, Tamil Nadu, South India (Fig. 1). Topography of the area is mostly flat except for a few knolls. The altitude ranges from 300 to 1,965 m amsl. The vegetation types in this intensive study area were classified as Southern Deciduous Scrub Forest (SDSF), Miscellaneous + Plantation Forest (MISC + PL), Southern Dry Mixed Deciduous Forest (SDMDF), Southern Moist Mixed Deciduous Forest (SMMDF) and Southern Sub-Tropical Hill Forest (SSTHF) (Subramanian, 2003).

Fig. 1



Theni Forest Division

Gudalur Range experiences extreme climatic conditions. The temperature ranges from 25.0^{o}C to 38.0^{o}C in summer and 9^{o}C to 26^{o}C in winter. An average rainfall of 598 mm from June to August (South-West monsoon) and 766 mm from October to December (North-East monsoon) were recorded. Based on the rainfall, four distinct seasons viz., pre-monsoon (June-August), monsoon (September-November), post-monsoon (December-February) and summer (March-May) are recognized in the study area. The Public Works Department has constructed Highwavy, Manalar, Venniar and Eravangalar dams to impound water from Highwavys hills. From the reservoirs, water is taken through penstocks to Suruliar Power House for power generation (35 MW). The

construction and operation of dams has resulted in negative impacts on wildlife and their habitats (Corfield, 1973; Sukumar, 1989; Sivaganesan, 1991).

There are two camps within Gudalur Range at Minnilayam – TNEB Camp and Tamil Nadu Forest Department Camp. Apart from this, there are three settlements viz., Vumaiyan Thozhu, Parai Thozhu and Paliyar Kudisai located in the boundary of the Reserve Forest. The total human population is around 350. There are about 894 cattle and 250 goats. There are 40 Paliyar tribal families residing in Paliyar Kudisai settlement that mainly depend upon the forest resources. These people utilize the forest daily for many purposes such as grazing, firewood and NTFP collection. The villagers near Gudalur range also visit the forest daily for grazing, firewood collection and NTFP collection (Plate 1). There are eight private orchards covering an area of 80 ha at the forest boundary. The firewood and NTFP collectors visit the forest daily on foot, on bicycle or by bus. The leasers use crackers to scare the monkeys so that they avoid feeding on NTFP.

Methods

Data collection on benchmark survey (questionnaire survey) was conducted in the nearby villages and forest settlements from January 2004 to December 2006 to find out the status of people, scrub cattle population, quantity of NTFP and firewood collection by the villagers per day. Direct field observations were also made to find out the anthropogenic pressures. Data was collected once a month. The distance from the reserve forest area to the nearest village was measured by pedometer. Scrub cattle means that the cattle are very thin, can not produce milk and they are exclusively maintained for dung and meat (Plate 1).

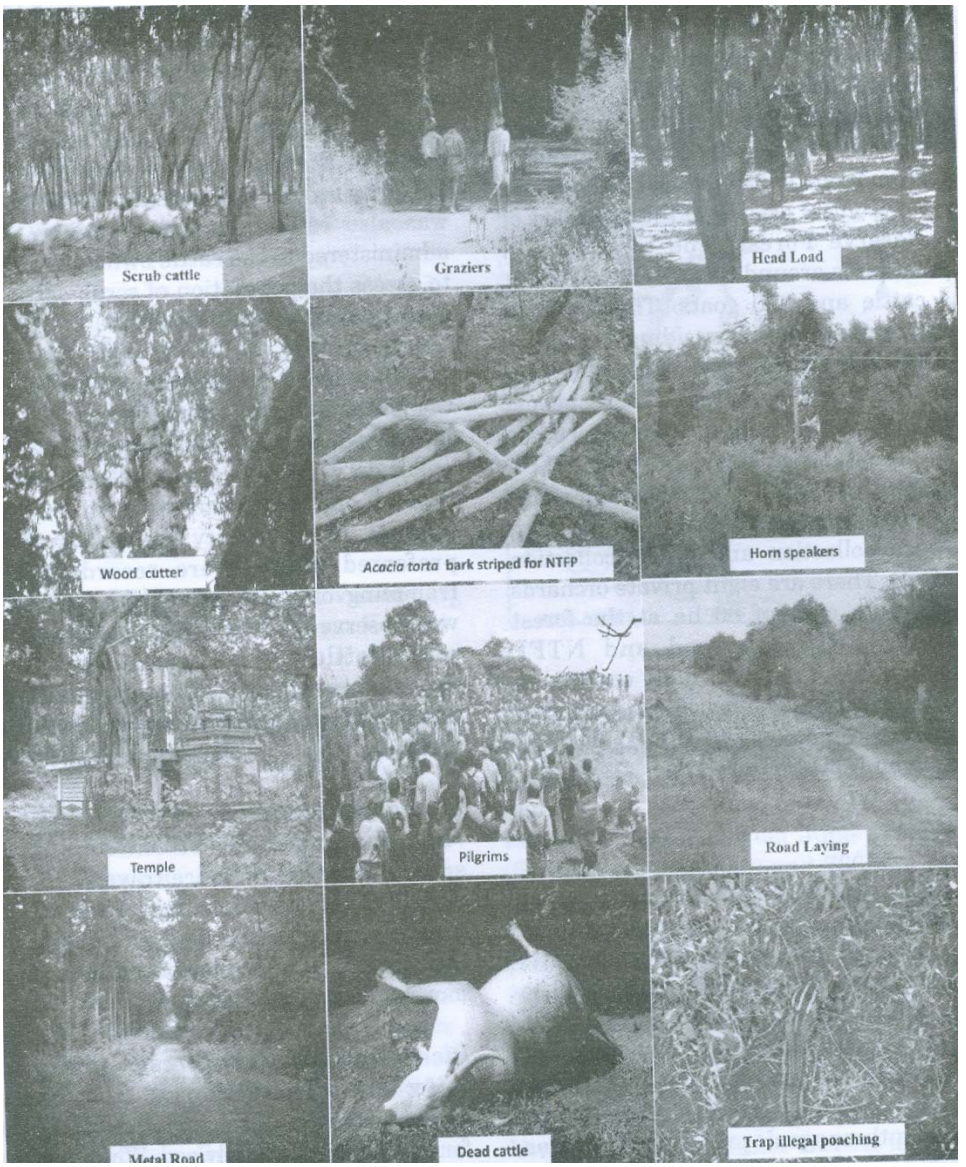
Scrub cattle population estimation : The scrub cattle population was counted at the time of entry to the forest by direct total counting method (while entering the forest – 09.00 to 10.00 hours). The number of cattle in the pen during early morning (06.30 hours) and late evening (18.00 hours) was also estimated. Questionnaire was administered to the cattle owners/graziers to assess the population of scrub cattle in each focal village/settlements.

In order to quantify the availability of the preferred plant food items of Grey junglefowl, a total of eleven 10 x 10 m^2 quadrats were laid alternately on either side of one km transect with 100 m. interval. The frequency and density of the preferred plants were recorded. The trampling of plant species by the cattle was observed. Observation on feeding of scrub cattle were scored as browsing (leaves, branches, bark, shrubs, sedges, bamboo, fruits) and grazing (all species of grass).

Identification of traditional NTFP collectors : Data on number of NTFP collectors, plant species collected, distance traveled by the NTFP collectors in a day, quantity of products collected per day, mode of process and mode of sale was gathered once in a month during the study period.

Identification of forest fuelwood collectors : The villagers from these settlements/villages depended on the forest for the collection of fuelwood. While cutting the old wood/log more a lot of noise was made. It is affecting the Grey junglefowl's feeding, breeding and display activities. Apart from this, roosting trees of Grey

Plate I



Anthropogenic pressures in the study area - Gudalur Range

junglefowl/wild birds are being cut by the villagers. Data gathered on number of fuelwood collectors, plant species collected, distance travelled by them in a day, quantity of fuelwood collected per day and man and woman involvement was gathered whenever they were encountered in the forest areas at Gudalur Range during the study period.

Results

Cattle population and grazing : The benchmark survey revealed that 894 cattle and 250 goats entered this forest range from three villages/settlements. About 445 cattle (50%) and 389 cattle (44%) visited from Gudalur village and Umayan Thozhu respectively. Only 60 heads of cattle (6%) visited from Parai Thozhu settlement (Table 1). It was found that these cattle graze from 10.00 – 17.00 hrs daily in the forest areas.

Density of food plants of Grey junglefowl (sampled area 1,000m x 25 m) : A total of 37 food plant species of Grey junglefowl were recorded. They were belonging to 30 Genera, 23 Families and 18 Orders (Table 2). *Eranthemum* sp., *Panicum miliaceum*, *Panicum* sp, *C. dactylon*, *L. camara* and *Z. oenoplia* were recorded in high densities (>100/ha) whereas species such as *Carica papaya*, *Ficus benghalensis*, *Syzygium cumini*, *Bauhinia racemosa*, *Oryza* sp. and *L. lycopersicum* were recorded in low densities (<5/ha).

Out of 37 plant species observed 15% of the plant species have been trampled by the scrub cattle. The cattle browsed 50% of plant species and grazed 5% of plant species, of which all were food species of Grey junglefowl.

Non-Timber Forest Produces (NTFP) : At Gudalur range 12 Non-Timber Forest Produce (NTFP) items were collected by the local people. These include six species of creepers, four species of trees, one species of grass and one species of herb. About 760 people were involved in the Non-Timber Forest Produce (NTFP) collection throughout the year. They collected Non-Timber Forest Produce (NTFP) and sold them in the local market (Table 3). The people removed the understorey (herbs and shrubs) to collect the fruits and pods of

Table 1

Cattle population at Gudalur Range, Theni Forest Division - 2005.

Traditional graziers	Village	Total cattle population	%	Distance from the forest (km)
1	Umayan Thozhu	90		0.5
2	Umayan Thozhu	134	44	0.5
3	Umayan Thozhu	165		0.5
4	Parai Thozhu	60	6	0.3
5	Gudalur	225	50	4.0
6	Gudalur	220		4.0
	Total	894	100	

Table 2

The density of food plant species of Grey junglefowl at Gudalur Range, Theni Forest Division.

Sl. No.	Vernacular Name	Scientific Name	Order	Family	Density /ha
1	2	3	4	5	6
1	Mookuthi purasu	*Ageratina adenophora*	Asterales	Compositae	49.1
2	Pulichi kodi	*Ziziphus oenoplia*	Celastrales	Rhamnaceae	99.1
3	Pappali	*Carica papaya*	Cucurbitales	Caricaceae	0.9
4	Pei Pudal	*Kedrostis* sp.	Cucurbitales	Cucurbitaceae	16.4
5	Naiyuruvi	*Achyranthus aspera*	Curvembryae	Amarantaceae	80.0
6	Kattu keerai	*Amaranthus* sp.	Curvembryae	Amarantaceae	21.8
7	Amman Pacharuci	*Cyperus iria*	Cyperales	Cyperaceae	54.5
8	Kamala	*Mollotus philippensis*	Euphorbiales	Euphorbiaceae	13.6
9	Sangu chedi	*Azima tetracantha*	Gentianales	Salvadoraceae	20.0
10	Arugan pullu	*Cynodon barberi*	Graminales	Poaceae	89.1
11	Arugan pullu	*Cynodon dactylon*	Graminales	Poaceae	104.5
12	Wild rice	*Oryza* sp.	Graminales	Gramineae	3.6
13	Sama pullu	*Panicum miliaceum*	Graminales	Poaceae	105.5
14	Sama pullu	*Panicum* sp.	Graminales	Poaceae	110.9
15	Unni chedi	*Lantana camara*	Lamiales	Verbenaceae	104.5
16	Indu	*Acacia torta*	Leguminales	Mimosaceae	80.0
17	Athi	*Bauhinia racemosa*	Leguminales	Caesalpiniaceae	3.6
18	Moongilai	*Indigofera* sp.	Leguminales	Leguminosae	12.7
19	Karu Indu	*Pterolobium indicum*	Leguminales	Mimosaceae	21.8
20	Kattu chedi	*Hibiscus* sp.	Malvales	Malvaceae	12.7
21	Vella achi	*Waltheria indica*	Malvales	Sterculiaceae	40.9
22	Navel	*Syzygium cumini*	Myrtales	Myrtaceae	3.6
23	Vedimuthu	*Eranthemum* sp.	Personales	Acanthaceae	107.3
24	Kattu thulaci	*Justicia glauca*	Personales	Acanthaceae	45.5
25	Kana milakai	*Capsicum annum*	Polemoniales	Solanaceae	31.8
26	Thakkali	*Lycopersicon lycopersicum*	Polemoniales	Solanaceae	5.5
27	Kandan kathiri	*Solanum insanum*	Polemoniales	Solanaceae	40.0
28	Manathakkali	*Solanum nigrum*	Polemoniales	Solanaceae	48.2
29	Kattu sundai	*Solanum tarvum*	Polemoniales	Solanaceae	40.9
30	Sundai	*Solanum trilobatum*	Polemoniales	Solanaceae	20.0

Contd...

1	2	3	4	5	6
31	Karai	*Canthium parviflorum*	Rubiales	Rubiaceae	10.9
32	Vella karai	*Canthium* sp.	Rubiales	Rubiaceae	50.0
33	Pavattai	*Pavonia odorata*	Rubiales	Rubiaceae	19.1
34	Modakkathan	*Cardiospermum canescens*	Sapindales	Sapindaceae	21.8
35	Ulavu	*Salmalia malabarica*	Tiliales	Bambaceceae	18.2
36	Aala maram	*Ficus benghalensis*	Urticales	Moraceae	1.8
37	Kattu athi	*Ficus* sp.	Urticales	Moraceae	3.6

Tamarind and Silk cotton respectively. This leads to destruction of undercover which affect the foraging, resting and nesting grounds of Grey junglefowl.

Firewood collection : Forty five firewood collectors (Plate I) visited the forest area and collected 1,125 kg @ 25 kg of head load of fire wood. Of these, 22 persons were from Gudalur village (18 female and 4 male), 15 were from Kullappa Ghavundan Patti (10 female and 5 male) and 8 were from Karunanthan Patti (7 female and 1 male) and all of them visited Gudalur range for fire wood collection. Out of 15 plant species, *Schleichera oleosa*, *Grewia tillifolia* and *Acacia torta* were the dominant plant species preferred as firewood by the local people. They carried the fire wood by head load (n=41), by cycle (n=3) and by motor cycle (n=1). They sold the fire wood for Rs. 60-75 per load to the local tea shop. It was observed that 60% of the firewood was for sale and 40% for their own use.

At Gudalur Range the TNEB (Tamil Nadu Electricity Board) workers clean the Grey junglefowl nesting bushes, proon the Grey junglefowl roost trees and deliberately collect the eggs as they are rich in protein content and delicious too. The TNEB vehicles killed the wild animals/birds and Grey junglefowl occasionally (number of observations = 3)

The pressures on Grey junglefowl habitats in this area were encroachment into forest land for agriculture, ganja cultivation, wood cutting and the clearing of *Lantana camara* and *A. torta* bushes. Three metal roads (Plate I) criss cross the study area where the wild animals were accidentally killed by the vehicles. There are two temples (Plate I) located in the boundary of the reserve forest where the pilgrims visited often. Mangala Devi Kannaki temple is situated in the hill top (1,050 m) of the study area where many thousands of pilgrims (Plate I) visit every year to worship the Goddess Kannaki which affects the Grey junglefowl and other fauna by way of creating foot path (removing bushes) and creating noise while several thousands of people enter into the forest areas. The most serious threat to the long-term survival of the endemic Grey Junglefowl comes from the activities of poachers who set traps (Plate I) to catch the Grey Junglefowl. The poachers set the snores in foraging areas and spread the fried grains over the snores. The fowls were attracted by the fried grains and would entangled on the snores (number of observations = 6) ; further the poachers

Table 3

The parts collected and the quantity of Non Timber Forest Produces (NTFP) collected at Gudalur Range, Theni Forest Division - 2005.

Sl. No	Habit	Vernacular Name	Scientific Name	No. of people involved	Part collected	Quantity collected/ day	Rs./kg
1	Grass	Ithai	*Ochiandra* sp.	10	Entire plant	15 kg	150.00
2	Herb	Moovelai	*Indigofera trifoliata*	10	Leaves	5-10 kg	4.00
3	Creeper	Pai Indu	*Acacia* sp.	200	Bark	20-30 kg	4.00
4	Creeper	Indu	*Acacia* sp.	200	Bark	20-30 kg	4.00
5	Creeper	Milagu Kodi	*Piper nigrum*	50	Entire plant	5-10 kg	2.00
6	Creeper	Seyakai	*Acacia sinuta*	30	Pod	5-10 kg	10.00
7	Creeper	Karu Indu	*Acacia torta*	50	Tender leaves	3 kg	25.00
8	Creeper	Pai pudal	*Kedrostis* sp.	10	Pod	5-15 nos	250.00
9	Tree	Lavangai	*Litsae* sp.	50	Leaves & Bark	10 kg	15.00
10	Tree	Nelli	*Emblica officinalis*	50	Pod	100-200 kg	4.00
11	Tree	Tamarind	*Tamarindus indica*	50	Fruit	100-200 kg	10.00
12	Tree	Silk cotton	*Salmalia malabarica*	50	Pod	100-200 kg	25.00
	Total			760			

caught the incubated female by applying heavy cloth over it (number observations = 11) as a result the eggs also got destroyed.

Discussion

This study shows that the anthropogenic pressures such as livestock grazing, collection of firewood and Non Timber Forest Produce (NTFP) exist in Gudalur Range, Theni Forest Division. The anthropogenic pressures resulted in the degradation of the habitat and grazing of livestock population in the forest areas which may cause pressure on the integrity and quality of the habitat of Grey junglefowl and other wild animals. The Grey junglefowl played an important role in seed dispersal. Hence, it acts as key stone species (Sathyanarayana, 2006). Conservation of Grey junglefowl habitats is imperative as they show a bio-diversified character i.e., roosting on tall trees, foraging on open and taking rest under bushes.

Deforestation occurred due to dam construction for hydro-electric projects, agricultural and developmental activities. This in turn has restricted the population and breeding of many species including many endemics such as Grey junglefowl. In the present study area, disturbances associated with two hydroelectric projects are also having a negative influence. Generally, dams impound reservoirs of various sizes, shapes and volumes with a view to generate hydro-electric power or provide water for irrigation. In southern India there are over 40 dams creating water bodies with submersion areas varying 5 to 150 km^2. Due to dam construction several hectares of wildlife and Grey Junglefowl habitats submerged in water. In such a situation, Corfield (1973) stated that the bigger mammals and other wild animals destroy the woodlands in the surrounding areas. Sukumar (1989) stated dams and their associated developments have caused an indirect reduction in wildlife habitat by increasing the extent of cultivation in the western ghats areas. Further the impacts of dam projects in the western ghats have been emphasized by Sivaganesan (1991).

In the present study area, about 894 cattle and 250 goats visited every day for grazing. It is affecting the Grey junglefowl's nests and its breeding grounds. Grazing of livestock in the forest areas may cause pressure on the integrity and quality of the habitat of Grey junglefowl and other wild animals. According to Gaston *et al*. (1981), one of the reasons for the decline in the number of Western Tragopan population in its range was livestock grazing. Kaul *et al*. (1995) mentioned that the over-hunting of pheasants was observed to be the main problem in northern India. The increasing of livestock population, particularly the scrub cattle in the forest areas has caused pressure on the integrity and quality of the forest wealth. The cattle population is increasing every year and the grazing incidence is very much above the carrying capacity of the forest area. Further, the grazing pressure has caused degradation of the forest due to lack of natural regeneration. Moreover, the intense grazing causes erosion of soil and loss of soil fertility. In the forest areas, unpalatable plant species dominate the ground cover and favoured food plants, herbs, shrubs, trees and roost trees do not regenerate with the effect of grazing by unproductive cattle. Sivaganesan *et al*. (2003) emphasized the effect of scrub cattle on the Greater Moyar Valley in the Nilgiri Biosphere Reserve. They further stated that the grazing pressure has drastically altered the ground cover and has led to

increase in weeds and other xerophytes plants namely *Lantana camara*, *Opentia dillenii* and *Euphorbia antiquoarum*. Hence, it is to be highlighted that the micro-habitats may be viewed under optimal foraging theory. The greater time spent on feeding by scrub cattle could slowly remove the green biomass from the ground cover and thus leading to degradation of Gudalur Range.

At Gudalur Range, the local people entered the forest areas for NTFP collection and firewood collection for their survival. Twedt *et al*. (1999) and Keyser *et al*. (1998) stated that the type of forest and human disturbances are mostly affecting ground nesting birds. The livestock grazing NTFP collection and firewood collection resulted in the degradation of the habitat.

Ridley and Hill (1987) opined that data on the habitat requirements of a species could be useful for predicting the effects of habitat destruction due to humans on natural communities. The habitat requirements of the pheasants are important for prescribing management options. Subramanian (2003) has mentioned that the Grey junglefowl required <40% canopy cover, >41% shrub cover, <40% grass cover category. They further informed the overall Availability -Utilization (A-U) of habitat analysis showed that the Grey junglefowl used SMMDF habitat more (preferred) and the MISC + PL habitat less (avoided) in Gudalur Range. Hence, the anthropogenic pressure should be minimized or stopped immediately for the betterment of survival of Grey Junglefowl and other wild animals at Gudalur Range.

Species like the Grey junglefowl have received little management attention. Being a ground nesting bird, the Grey junglefowl is vulnerable to the conversion of forests to other land uses. The most serious threat to the long-term survival of the endemic Grey junglefowl comes from the activities of poachers who set traps to catch the birds. The Grey junglefowl is terrestrial and trapped very easily for its meat and protein-rich eggs. Although the species is now found outside protected areas, a fairly good number only survive in protected areas. Some birds have also been exported abroad illegally. Alternate livelihood programmes may be launched or intensive awareness programmes with regard to resource utilization and management for villagers who live near the Theni Forest Division.

Management suggestions

It is essential as a long-term aim that conservation education should be encouraged among local people. The main attributes of local people that influence conservation attitudes, habitat management and resource harvest should be identified and incorporated in the management strategies. Because the Grey junglefowl is involved in seed dispersal, controlling insect pests at the forest level and falls prey to predators it is an important species in maintaining the ecosystem in the wild.

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SUMMARY

894 cattle and 250 goats visited Gudalur Range from three villages/settlements. A total of 37 food plant species of Grey Junglefowl were recorded. Out of 37 plant species observed, 15% of the plant species have been trampled by the scrub cattle. The cattle browsed 50% of plant species and grazed 5% of plant species. Forty five firewood collectors visited the forest area to collect 1,125 kgs of fire wood. Out of 15 plant species, *Schleichera oleosa*, *Grewia tillifolia* and *Acacia torta* were the dominant plant species preferred as firewood by the local people. They carried the fire wood by head load (n=41), by cycle (n=3) and by motor cycle (n=1). They sold the fire wood for Rs. 60-75 per load to the local tea shop. It was observed 60% of the fire wood for sale and 40% for own use. At Gudalur range 12 Non Timber Forest Produce (NTFP) items were collected by 760 local people throughout the year. Disturbances associated with two hydroelectric projects are also having a negative influence in the area. Three metal roads criss cross the study area where the wild animals were accidentally killed by the vehicles. There are two temples located in the boundary of the reserve forest where the pilgrims visited often. Mangala Devi Kannaki temple is situated in the hill top (1,050 m) of the study area where many thousands of people visit every year to worship the Goddess Kannaki. There is an urgent need for surveys to be done to determine the whereabouts of viable populations of the Grey junglefowl. It is essential as a long-term aim that conservation education should encourage people as the Grey Junglefowl is involved in seed dispersal, controlling insect pest in the forest level and fall prey on predators ; totally it is maintaining the ecosystem in the wild.

Key words **: Grey junglefowl, *Gallus sonneratii*, Anthropogenic pressures, Gudalur Range, Theni Forest Division, Western Ghats, Tamil Nadu.**

थेनी वन मुण्डल, पश्चिमी घाट प्रदेश के गुडालूर परिक्षेत्र के घूसर जंगली मुर्गी (*गाल्लुस सोन्नरेटिआई*) प्राकृतावासों पर पड़ता प्राणि जनित दबाव

एन० रमेश व एम० सी० सत्यनारायण

सारांश

तीन गावों/बस्तियों के 894 गाय भैंस और 250 बकरियां गुडालूर परिक्षेत्र में आई। घूसर जंगली मुर्गी की कुल मिलाकर 37 भोजन पादपजातियां आलेखित की गई। इन 37 पादप जातियों में से 15% पादप जातियों क्षुद्र गायभैंस द्वारा पैरा तले रौंदी गई। गाय भैंसों ने 50% पादप जातियों की कोपले खांई तथा 5% पादप जातियों को चरा। 45 ईंधनकाष्ठ संग्राहक वन क्षेत्र से 1125 किग्रा ईन्धनकाष्ठ संग्रह करने के लिए आए। 15 पादप जातियां में से *श्लाइकेरा ओलिकोसा, ग्रीविया टिलिएफोलिया* और *अकेसिया टोर्टा* प्रमुख पादपजातिया रही जिन्हें स्थानीय लोगों ने ईधन काष्ठ के लिए पसन्द किया। ईधनकाष्ठ को सिरबोझ बनाकर (n=41) साइकिलों पर (n=3) और मोटर बाइसिकल द्वारा (n=1) लेकर गए। उन्होंने यह इन्धनकाष्ठ स्थानीय चाय दुकान वालों को रु० 60–75 प्रति बोझी की दर से बेचा। देखने में यह आया कि 60% ईधनकाष्ठ बिक्री के लिए और 40% अपने निजी उपयोग के लिए काम लगाया गया। गुडालूर परिक्षेत्र में गैर–प्रकाष्ठ वन उपज की 12 वस्तुएं 760 स्थानीय लोगो द्वारा पूरे वर्ष पर इकट्ठी की जाती रही। दो पन बिजली परियोजनाओं से जुडे झगड़ो का भी क्षेत्र पर नकारात्मक प्रभाव पड़ा। अधीत क्षेत्र में तीन पक्की सड़के बनी हुई है जब जंगली पशु गाड़ियों द्वारा हुई दुर्घटनाओं में मारे गए। आरक्षित वन की सीमा पर दो मन्दिर अवस्थित है जहां तीर्थयात्री बहुधा आते रहते हैं। मुगलादेवी कनक्की

मन्दिर पर्वत शिखर पर (1050 मी०) बना हुआ है जहाँ हजारो लोग प्रतिवर्ष कनक्की देवी की आराधना करने आते हैं। इस बात की तत्काल आवश्यकता है कि घूसर जंगली मुर्गी की जीवित रहने वाली संख्या के स्थलों का पता लगाने के लिए सर्वेक्षण कराए जाएं। दीर्घकालिक लक्ष्य के लिए यह अनिवार्य है कि संरक्षण शिक्षा से लोगों को प्रोत्साहित किया जाना चाहिए। क्योंकि घूसर जंगली मुर्गी बीज विकिरण में भी अपना योगदान करती है, वन तल पर नाशिकीटों को नियन्त्रित करती है और हिंस्र प्राणियों का शिकार भी करती है। कुल मिलाकर जंगली क्षेत्र में यह परिस्थिति–संहति को यथावत् बनाकर रखती है।

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