



Journal of the

Madras Geographical Association

Vol. No. 1. April 1927.

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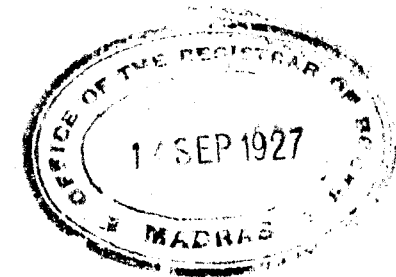
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ASSOCIATION : : :



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THE MADRAS GEOGRAPHICAL ASSOCIATION

RULES.

1. The name of the Association shall be 'The Madras Geographical Association.'

Objects.

2. The objects of the Association shall be :—
- (A) To promote geographical knowledge ;
 - (B) To secure for geography its proper place in the High School, the University and its constituent and affiliated colleges ;
 - (C) To help to improve the methods of teaching geography ;
 - (D) To work for a school of geography being started ;
 - (E) To promote studies about South India from various standpoints.
3. These objects shall be secured by :—
- (A) Holding meetings and conferences, and publishing periodicals and occasional bulletins ;
 - (B) Organizing geographical exhibitions and excursions ;
 - (C) Helping in the preparation of geography books in the languages current in the Presidency ;
 - (D) Forming a central library of geographical literature, and collecting maps, charts, plans, models, slides and instruments ;
 - (E) Providing for circulation to members, of books, periodicals, and other collections ;
 - (F) And by such other ways as are deemed necessary to effectuate the objects of the Association.

Membership.

4. The membership of the Association shall be open to all those who are interested in the promotion of geographical knowledge or in the teaching of geography.

5. There shall be two classes of members, honorary and ordinary.

6. Honorary members are those who shall be so elected by the council by the majority thereof present at its meeting. They shall be exempt from liability to pay subscription, and shall have all the privileges of ordinary members, except voting.

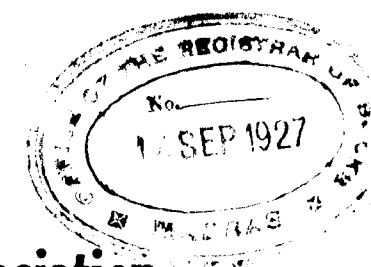
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ANNOUNCEMENT.

Members and Subscribers are requested to note the change of Address of the Association from Y.M.C.A., Vepery to **Gopalapuram, Cathedral Post, (Madras.)**

N. SUBRAHMANYAM.

Secretary.



— THE JOURNAL OF —

The Madras Geographical Association.

Vol. II.]

April 1927.

[No. I.]

Ourselves.

This Journal enters on its second year with confidence and hope. When it began, it had to force itself on the attention of people indifferent to the claims and ignorant of the value of Modern Geography in daily life. Enabled by the activity and support of the members of the Madras Geographical Association, and helped also by the Director of Public Instruction, Madras, it has revived interest in Geographical Studies here, and focussed thought on the geographical conditions of the Madras Region. The first volume speaks for itself, containing as it does, a series of valuable articles of high intrinsic worth. We are happy to quote here what "Geography", (formerly 'The Geographical Teacher') of London, says in reviewing the second number of this volume:—"Vol. I, No. 2, of the magazine of the Madras Geographical Association consists of a survey of the physical geography and evolution of the Madras district. It contains a number of folder maps and graphs, and forms a really valuable reference book to the Madras area so far as physical facts are concerned."

The Birds of South India : Their Distribution and Habits.

The evolution of birds has been determined by their getting adapted to only one end, namely, flight ; and, when this adaptation has reached its perfection, it has resulted in their showing a highly

stereotyped, uniform, organization. That is the reason why birds look very much like each other in their build. In other words, they cannot afford to vary, since any variation would mean a detriment to flight; and since they cannot afford to lose flight, they have retained their stereotyped organization.

Birds are adapted beautifully to their environment, and this could be made out by observing their beaks, neck and legs which show how well they are adapted to their mode of life. The chief differences among them are mainly due to their food and the medium in which they live.

I propose this evening to put on the screen some of the common birds to be seen in Southern India, and describe their life-habits, in brief, mentioning wherever available their Indian names (which are set forth in the Appendix).

We first take the *Aquatic Birds*, which fall naturally into two groups-the marine or sea-coast birds and fresh water birds.

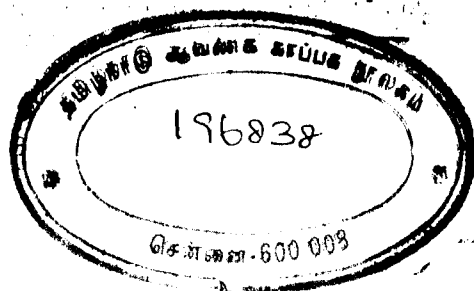
I. MARINE BIRDS.

The Gull.

Of the *Marine Birds*, the commonest is the *Gull*. One variety of it, the laughing-gull is so-called as its note resembles human laughter. Its legs are short, and being an aquatic bird, its toes are webbed. It can, therefore, swim as well as fly; and it lives on fish. Its prevailing colour is white; and the wings have black edges. Some gulls build their nests on adjoining trees. Others choose a bare rock by the sea-side to lay their eggs in, and leave them there to be hatched by the sun's heat. The eggs are so shaped and weighted that when there is a gale, they rotate on their own axes, and make ellipsoid tours and thereby escape falling into the water.

The Tern.

The *Tern* is another common marine bird. It has a white plumage and a black cap, while its wings are longer. Its eggs resemble beautifully the shells and pebbles on the sand, and it lays them on the bare sand in shallow pits.



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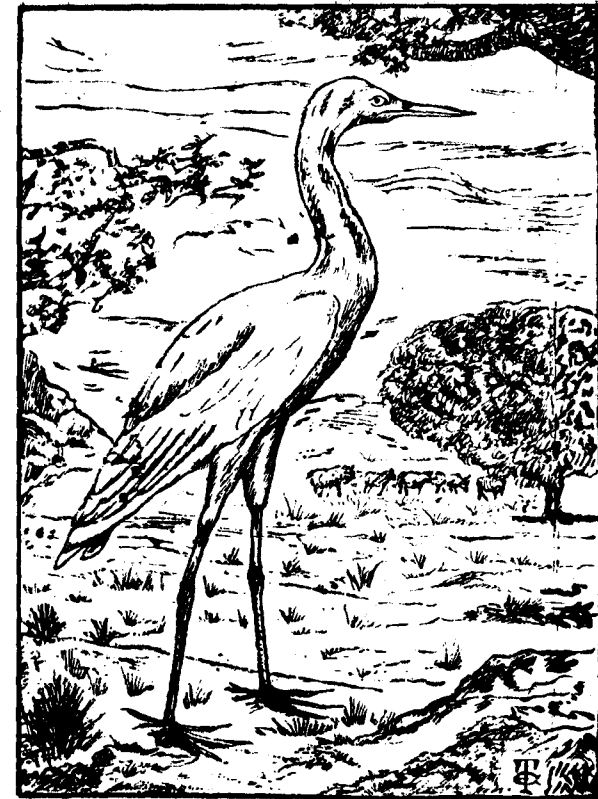


Fig. 1. Cattle-Egret.



Fig. 2. King-fisher.

II. FRESH-WATER BIRDS.

The *Fresh-water Birds* are chiefly to be seen on the banks of rivers like the Cooum, and in tanks and lakes like Pulicat and Sambarampakkam.

The Pond-Herons or Paddy-Birds.

The *Heron* adds to the physical beauty of the landscape.

The *Pond-heron* or *Paddy-bird* has a dull brown colour, and is difficult to locate when on the ground; but could be distinguished while on the wing, when it shows a good deal of white feathers. It waits for a long time to make a good catch, standing with its long neck concealed in its shoulders. It thus looks as an embodiment of Patience, Hope and Expectation. People often say that the heron is blind, but it is not a fact. It is so intently engaged in its work that it is not bent on seeing us, by-standers. It stations itself pretty long in the water, often sleeping on one leg.

The Cattle-Egret.

The second kind of heron is the *Cattle-Egret*, (Fig. 1), which lives on dry ground. It is so-called, because it is fond of walking along beside cattle when they are grazing, and often makes its joy-ride upon them. As the aigrette feathers, which ladies and rajahs wear in their head-dress, are taken from its breast and tail during the breeding season, this bird is of some economic importance.

The Night-heron.

A third kind of heron is the *Night-heron*. It spends the day in aquatic localities catching its food, and in the evening flies to its nest in the interior, making a peculiar cry "shwak" "shwak". The young herons are taken care of by their parents.

The Pelican.

The *Pelican* is seen in Lake Pulicat. It is of the size of a goose or a little bigger. It has a pouch in the lower jaw in which it stores fish.

The Adjutant.

The *Adjutant* is about the height of a man, being from 5 to 6 feet high, and lives on dead matter. It has no voice-box; but a

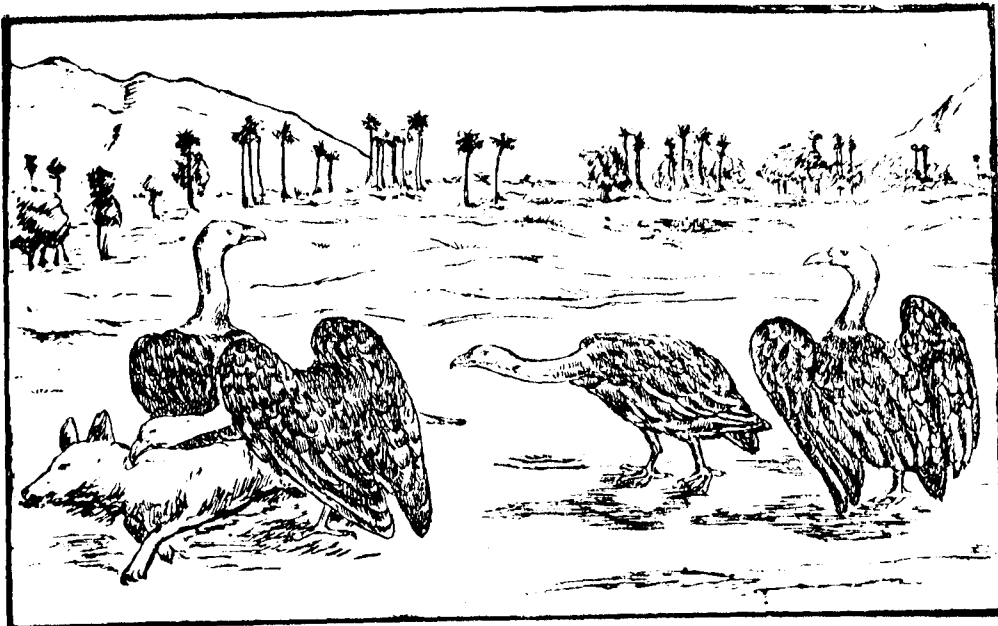


Fig. 5. Vultures.



Fig. 4. Wood-pecker.

number of these adjutants join together and clap their beaks in a chorus. Their marabou feathers are of economic value.

III. BIRDS THAT LIVE IN THE VICINITY OF WATER:

The Water hen.

Let me next take a group of *birds that live* in a variety of ways *in the vicinity of water*. The *water-hen* picks up insects on the banks of pools, tanks etc., and lives upon them. It makes a very hideous and unpleasant noise.

The White-breasted King-Fisher.

The *White-breasted King-fisher* makes its nests underground in burrows two or three feet below the surface, and resorts to fresh-water for feeding.

The Pied King-Fisher.

The *Pied King-fisher* (Fig. 2) has a black-and-white plumage, and feeds entirely on fish. It hovers over the water in mid-air, and when it sees fish, suddenly dives into the water, and emerges successfully with a fish in the mouth.

The Snipe.

The *Snipe* is very common and plentiful in South India during the cold weather. It frequents large sheets of water and wades in paddy-fields. During the rest of the year, especially in summer, it migrates to Siberia. It may be mentioned in this connection that birds, in their migrations, find no barrier either in high hills or in arms of the sea. A snipe makes half-a-dozen migrations during its life-history. The youngest start first instinctively, and others follow.

They rest by day and fly by night with great speed. People at light-houses have great scope for studying their migrations. (Snipe-shooting is a favourite pastime with Europeans here.)

IV. Birds of Prey.

We shall next take up *birds that live* in the open, in dry arid places, away from human habitations. *Vultures and Eagles* are typical of such birds. These are carnivorous. They are the



Fig. 5. Coppersmiths and nest.



Fig. 6. Spotted owl.

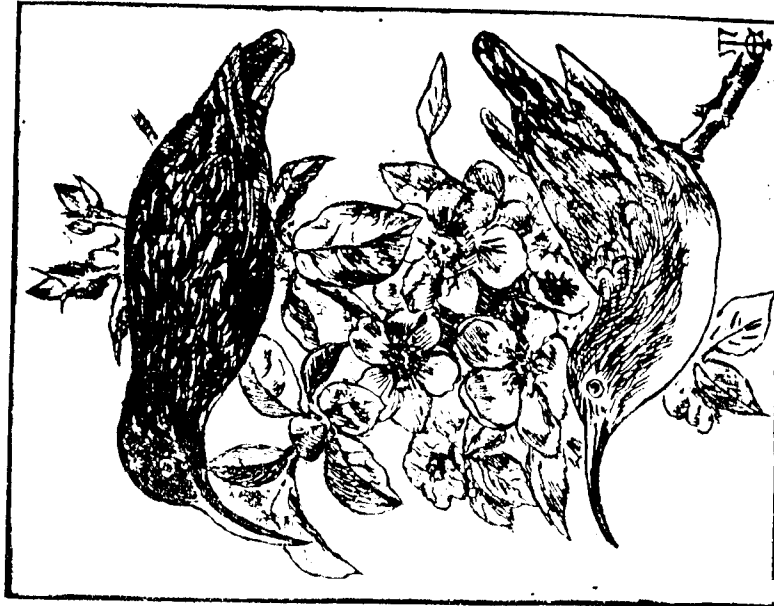


Fig. 7. Sun-bird.

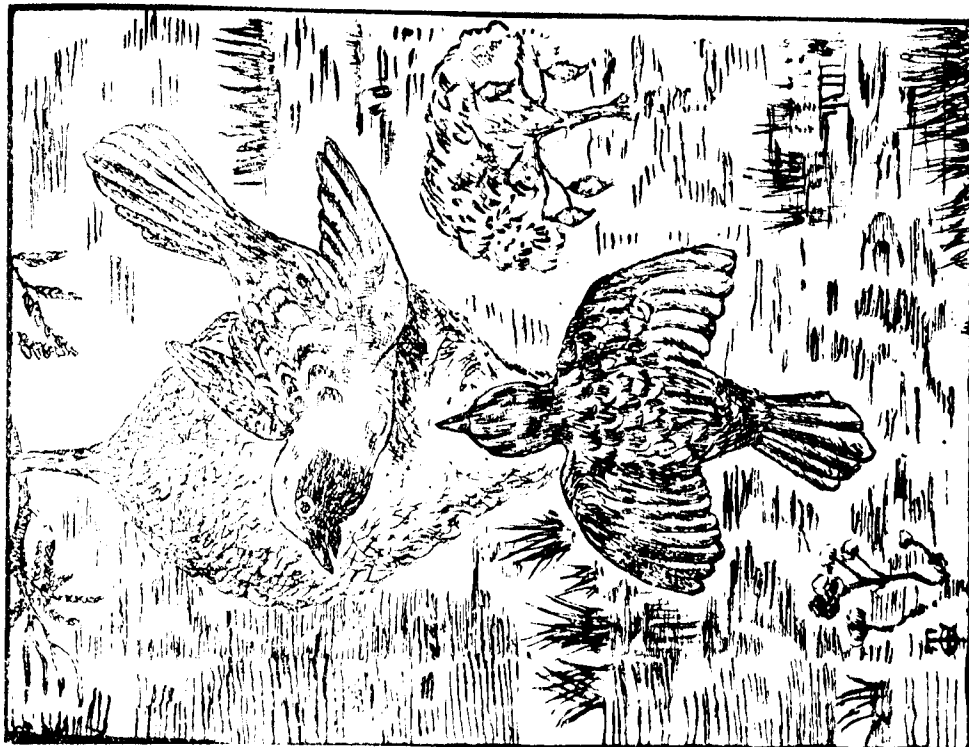


Fig. 8. Weaver-birds and nest.

best fliers and have very powerful eyes. Their bills are hooked and very strong and they carry their victims by their claws or talons. They are useful as scavengers. They build their nests on high inaccessible places. There used to be such nests in Madras, on the clock-towers of the Central Station and St. Andrew's Kirk, and on the top of the Chempauk Palace, where the Board of Revenue offices are now located.

The Vultures.

Vultures (Fig. 3) have bare necks, and are noted for their gluttony. They gorge themselves to their fill, and then find it difficult to fly after their heavy meal. They first run on the ground to gain momentum, and then fly to a great height. They take their hint from crows, and know where their prey is.

The *Yellow-necked Vulture* is a carrion-eater. The Tiruk-kazhukkunram birds are of this variety.

The Brahminee Kite.

The *Brahminee Kite* is common everywhere. He has a white neck, and is a coward, preferring robbing his prey to catching it. He fights in mid-air with his opponent, who has caught the prey, and when the food falls, both the birds rush after it. When one of them catches it again, the fight begins anew. The nest of the kite is built in high inaccessible places in a very crude way out of twigs. But he has æsthetic taste of a sort, and furnishes it with spoons, forks, broken pieces of china and other loot picked up at random.

The Pariah Kite

The *Pariah Kite* has a brown plumage and a forked tail.

The Hawk.

The *Hawk* is a bold and bloodthirsty bird, and is used as a pet, especially in the Guntur District.

V. TAME BIRDS: TERRESTRIAL AND ARBOREAL.

Let us next take the *tame birds*, both *terrestrial* and *arboreal* that live and run about human habitations.

The Peacock.

The *Peacock* lives about low hills, and is sacred to the Indian Mars, God Subrahmanya. The male bird, as is well-known, has a remarkable plumage.

The Pigeon.

The *Pigeon* is a common pet in South India, and builds its nest usually in companies on the roofs of buildings.

The Dove.

The *Dove* is a smaller variety of the same bird, and is an agricultural pest. In Valliparinayam, we read of Valli, the consort of God Subrahmanya, engaged in driving away these birds from millet fields, standing on a platform made of sticks. This is a real life-picture of what actually takes place in the countryside.

The Parrot.

The *Parrot*, is a household pet, but is also a pest to the cultivator.

VI. ENTIRELY ARBOREAL BIRDS.

The Woodpecker.

Among the *entirely arboreal birds* is the *Woodpecker* (Fig. 4). It is a useful bird, as it lives on insects found in the stems of trees. It is a skilled carpenter, and good climber; and, while it climbs or goes to work, it adjusts its tail stiffly against the trunk.

The Copper-Smith.

The *Copper-smith* or *Crimson-breasted Barbet* (Fig. 5) has its nest in the natural hole of a tree. The male emits the familiar but monotonous cry of "tonk" "tonk".

The Owl.

The *Owl* (Fig 6) is quite a common bird, and is considered as a bird of ill-omen. But the owl has much to be said in its favour. It is very useful, as it lives upon rats, mice, lizards and such pests. It has large powerful eyes; and, owing to its soft silky feathers its flight is noiseless. It lives usually in the vicinity of man.



Fig. 9. Crows chasing a Koel.

The Sunbird.

The *Sunbird* or *Honey-Sucker* (Fig. 7) is one of the smallest of birds. It has a sharp curved bill, sharp as the needle at the point, and the tongue is long, thin, and tube-like, through which it sucks up the honey from flowers. The nest of the sunbird can be easily distinguished by cobwebs, which are assiduously collected and smeared over.

The Weaver-bird.

The *Weaver-bird* (Fig. 8) is common everywhere in South India. Its nest is suspended from the branches of trees in the shape of a flask, and is open and reached from below on one side. In the other half of the chamber is a platform on which eggs are laid. The bird puts in lumps of clay inside, possibly to weight the nest which is very light, and sticks on it fireflies and glow-worms.

The Koel or the Indian Cuckoo.

The *Koel* or the *Indian Cuckoo* (Fig. 9), whose note is very common in spring, is a parasite. The male and female differ in appearance; The cock is a shining black bird with bright red eyes, while the hen is a brown one largely spotted with white. The cuckoo does not build its own nest, but lays its eggs in the nests of other birds—especially crows. The male challenges the crow and lures it away, while the female throws the eggs and goes away. Though the eggs are far different from their own, the crows do not appear to make out the distinction. They sit on these eggs as on their own, and feed the young ones when they come out.

The Indian Roller or the Blue Jay.

Now I shall take the group of birds which I may call *Telegraph-wire birds*, because we generally see them on telegraph-wire. Of these, the *Indian Roller* or *Blue Jay* (Fig. 10) has a fine plumage, but its voice is unpleasant. It is insectivorous and pugnacious. It is often busy eating or fighting—the crow being its usual victim.

The Bee-eater.

The *Bee-eater* (Fig. 12) is also another beautiful bird, and is very common on telegraph-wires. It, too, lives on insects.

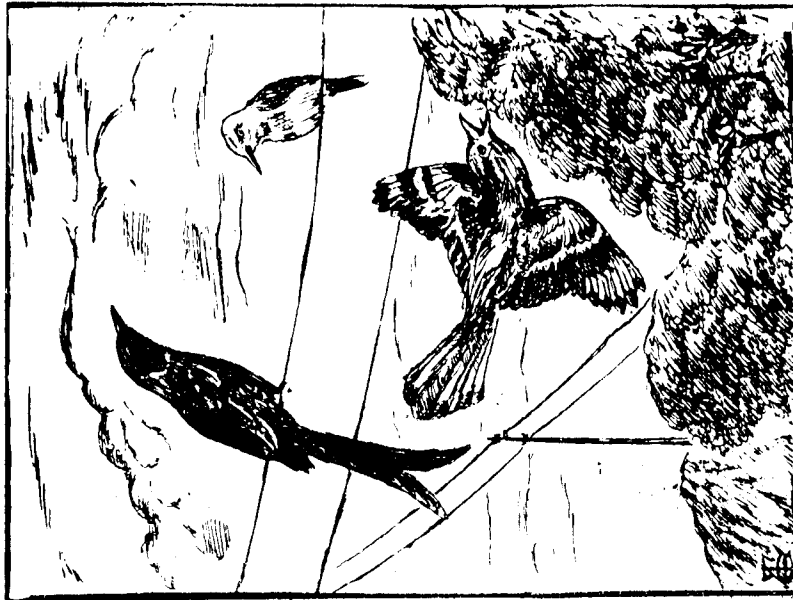


Fig. 10. Indian Roller.

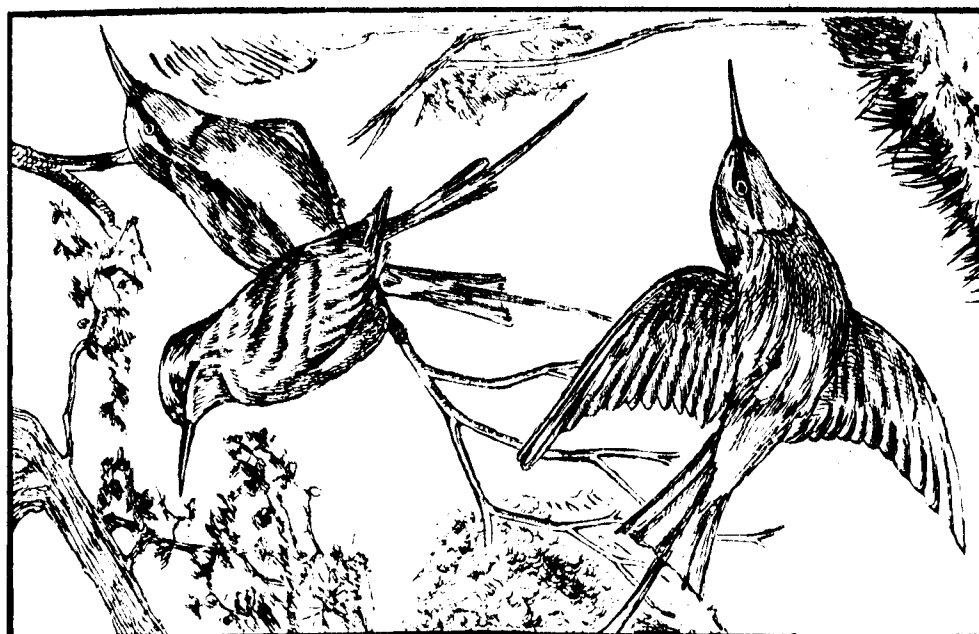


Fig. 11. Green Bee-eaters.

VII. GARDEN BIRDS.

The Hoopoe.

Let me next take the *Garden-birds*. Of these, the *Hoopoe* (Fig. 11) is a very beautiful bird. Its crest is often called the "other bill." It is also a very useful bird. It hops about on the ground, and picks up insects. Its nest is usually built in insanitary, decaying, rotten places.

The Wag-tail.

The *Wag-tail* is a black and white bird, and is very graceful in appearance. It is so-called from its habit of constantly wagging its tail. It utters a rich metallic note, and is a sweet songster.

The Magpie Robin.

The *Magpie robin* is another near relative, and is very common in Malabar, where it visits the houses in search of insects.

The Myna.

The *Myna* is a small bird, very common in South India. It is also very useful as it keeps down the insect-pest.

The Bulbul.

The *Bulbul* (Fig. 13) is also a very common bird, and is a cage-pet. It has a fine coloration, and is a sweet songster.

The Paradise Fly-catcher.

The *Paradise Fly-catcher* is a shy and retiring bird. The cock has three stages in its life. In the second year, he changes his feathers, and grows two long middle feathers in its tail; and in the third year, he again changes the colour of his feathers, while retaining the long middle feathers.

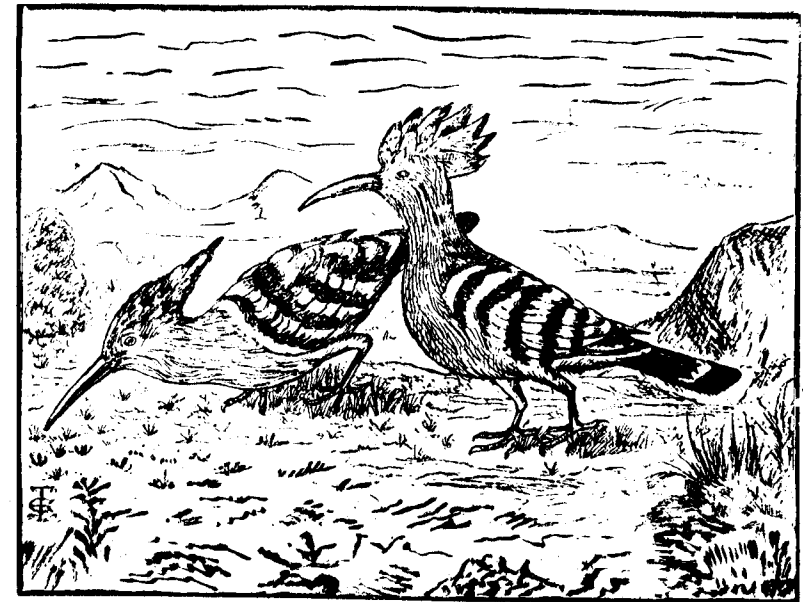


Fig. 12. Hoopoes.

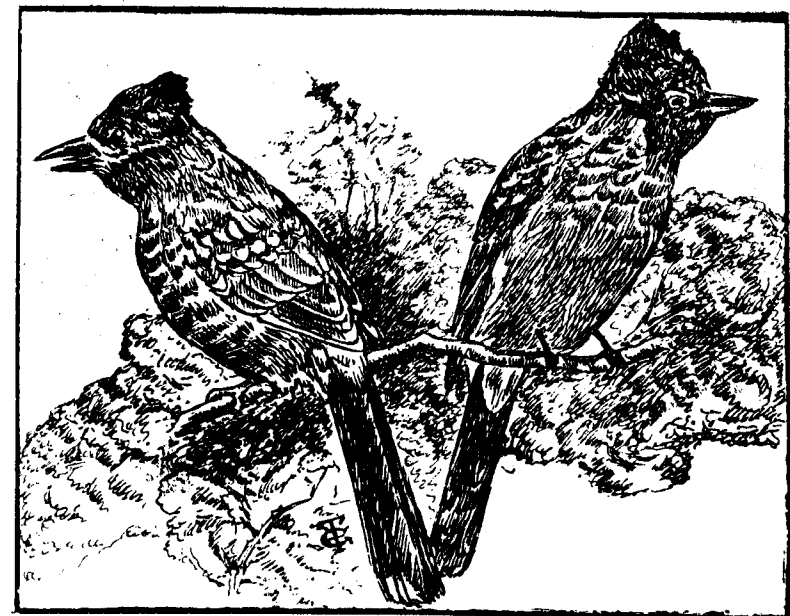


Fig. 13. Bulbuls.

VIII. BIRDS WHICH LIVE AMIDST MEN.

Last of all, we take the *birds which live amidst men*.

The Crow.

There are two species of the *Crow*—a larger and a smaller (Fig. 14). The latter is well-known for its impudence. The crow is an early riser, and is an emblem of hospitality in Hindu households. Being omnivorous, it is a very useful bird. The male crow usually takes care of the home. It is so silly that it does not recognise change of eggs.

The Pariah Crow.

The *Pariah Crow* is a jungle-crow, and its habits are similar to those of the house-crow.

The House Sparrow.

The *House-Sparrow* is a very common bird and is useful, being insectivorous. The cock has black stripe from the chin to the breast. It usually builds its nest in mid-roof.

I have now come to the end of my show, and thank you most heartily for your patient hearing. If I have succeeded in stimulating an interest in bird-life, that surrounds us almost everywhere, I shall feel immensely gratified.

C. Lakshminarayana, M. A.

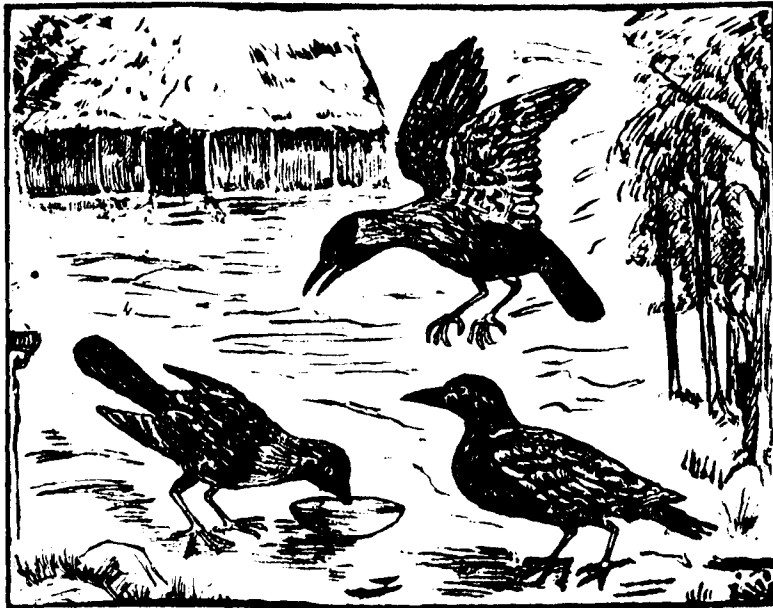


Fig. 14. House-crows.

An ordinary meeting of the Association was held on Monday the 17th January 1927 at 5 30 P.M., in the Madras Christian College, when Mr. C. Lakshminarayana, M.A., Lecturer in Zoology of the same College, delivered an interesting lecture on "*Birds of South India: their Distribution and Habits*", illustrated by lantern slides. (The account of the lecture is given above).

At the close of the lecture, Mr. E. W. Green moved the vote of thanks, expressing the immense interest which the pictures in the screen helped by the lucid presentation evoked in the audience. He ardently wished every school-boy was familiar with his birds,

The Annual Meeting.

The Annual Meeting of the Association was held on Monday the 17th January at 5 P.M. at the Madras Christian College with the President, M.R.Ry. Rao Bahadur H. Narayana Rao Avergal, M.A., I.E.S., in the chair. The following ladies and gentlemen were present :—

Messrs. G. D. Watkins, B.Sc., F.R.G.S., F.R. Econ. S.

K. Narasinga Rao, B.A., L.T.

K. Jogiah.

C. S. Srinivasa Chari, M.A.

K. Audiseshaiah, M.A.

V. N. Visvanatha Rao, M.A., B.L.

T. A. Ramanatha Sastri.

N. Rathakrishna Naidu.

W. Duraiswami.

E. W. Green, M.A.

V. K. Mahadeva Sastri, B.A., B.L.

B. Sanjiva Rao, B.A., L.T.

A. V. Sundaresan, B.A., L.T.

A. Swaminatha Iyer, B.A.

Miss. P. Grover.

Messrs. R. Seshagiri Rao.

C. S. Rangaswami Ayyangar, B.A., L.T.

V. K. Sourirajan, M.A., L.T.

M. S. Sabhesan, M.A.

N. Subrahmanyam, M.A., L.T.

The Report for 1926 was then read and adopted. The following were elected office-bearers and members of the working council :—

PRESIDENT :—M.R. Ry. Rao Bahadur H. Narayana Rao, M.A.,
I.E.S. (Retired).

Emeritus Professor of Geology, Presidency College, Madras.

VICE-PRESIDENTS :—Miss. E. D. Birdseye, B.Sc., Dip. in Geo.
(Lond).

*Lecturer in Geography, St. Christophier Training College,
Madras.*

Mr. S. Lakshmana Iyer, B.A., L.T.,

Ex-Lecturer in Geography, Teachers' College, Saidapet.

APPENDIX.

No.	English.	Latin.	Sanskrit.	Hindusthani.	Tamil.	Telugu.	Canarese.	Malayalam.	Remarks.
1	Gull				Kadarkakkai	Samudrapukaki		Kadalkakkai	
2	Tern	Sterna		Titri	Kokku	Kōnga	Konge	Kokka	
3	Heron		Baka	Bagla				Kulakkotti	
4	Pond heron or Paddy-bird	Ardeola grayii		Andha bagla	Kuruttukkokku				Fig 1
5	Cattle-Egret	Bulbuleus Coromandus		Gai bagla	Mattukkokku				
6	Night-heron				Gandharipakshi				
7	Pelican		Krakara		Koozhaikkada	Goodakonga, Kokkera		Jnarapakshi	
8	Adjutant	Amaurornis	Karetu		Periyanarai	Pedda Kokkera		Mahabakam	
9	Water-hen	Phoenicurus	Madhgu	Kinati, banmurghi	Neer-Kozhi	Neerukodi, damarakodi		Kulakkozhi	
10	King-fisher	Alcedo ispida		Kilkila	Meenkothe	Lakumukipakshi		Ponma	Fig. 2
11	Snipe			Machrala	Ullan	Neellabuchigadu			
12	Vultures	Otogyps Calvus		Gidh	Kazhuku	Ullanki pitta		Kazhugu	Fig. 3
13	Eagles	aquila	Gridhra			Rabandu			
14	Brahminee Kite		Garuda	Garud	Garudan	Garuthmanthudu		Garudan	
15	Pariah Kite	Milvus Govinda	Kanaka, Chilla	Chil	Parundu	Gradda		Parandu	
16	Hawk		Patri, syena	Shikra	Bairi	Dēga		Prappidian	
17	Peacock		Mor	Mayur	Mayil	Nemili		Mayil	
18	Pigeon	Columba livia	Kapota	Kabutar	Pura	Pavuramu		Pra, Kapotham	
19	Dove	Tutur		Fakhta	Manippura	Guvva			
20	Parrot	Palaeornis	Suka	Tota	Kili	Chiluka	Gili	Kili	
21	Wood-pecker	Aurantius	Dārwaḡhāta	Kathphuria	Sanarakkurivi	Vadrangipitta	Marakuttiga	Maramkothipakshi	Fig. 4
22	Copper-smith	Xantholaema		Bassunta					Fig. 5
23	Owl	Scops giu	Ulooka	Chogad Kusial	Andai	Gudlagooba	Googe	Kooman	Fig. 6
24	Sun-bird or honey-sucker	Arachnechthra asiatica		Shakar Khora	Thenkudi			Svarnakkili	Fig. 7
25	Weaver-bird	Ploceus baya		Baya	Thookanankurivi	Bangaru pichika		Elappakshi	Fig. 8
26	Koel	Endynamis honorata	Kokila	Koel	Kūyil	Kokilamu	Kogile	Kuyil	Fig. 9
27	Indian roller or blue jay	Coracias indica	Chāsha	Nilkant	Panankadai	Pālapakshi			Fig. 10
28	Hoopoe	Upupu indica		Hudhud	Ezhuthanikurivi	Kookuduguvva			Fig. 12
29	Wag-tail	Motacilla	Khangana	Dhobin	Vannathikkurivi	Kaujoo, Katukapitta		Valattipakshi	
30	Green bee-eater	Merops viridis		Patringa, harial					Fig. 11
31	Magpie-robin	Copsychus saularis		Dhayal	Maina	Gokarayee	Maina	Maina	
32	Myna	Acridotheres tristis		Maina	Bulbul	Maina	Bulbul	Bulbul	Fig. 18
33	Bulbul	Molpastes bengalensis		Bulbul		Bulbul			
34	Paradise fly catcher	terpsiphone paradisi		Shah bulbul, Sultana bulbul	Valkondalathi				
35	The Crow	Corvus splendens	Kaka	Kauwa	Kākkai	Kāki	Kāge	Kākkai	Fig. 14
36	House-sparrow	Passer domesticus	Chataka, Kalavinka	Gauriya	Kurivi	Pichika	Gubbi	Kurivi	

SECRETARY :—Mr. N. Subrahmanyam, M.A., L.T.,
Lecturer in Geography, Teachers' College, Saidapet.

TREASURER :—Mr. D. W. Wolfenden, B.A., L.T.
Ag. Headmaster, Bishop Corrie's High School, Madras.

OTHER MEMBERS :—Mr. G. D. Watkins, B.Sc., F.R.G.S., F.R.,
 ECON. S.,
Professor of Geography, Christian College, Madras.

Mr. M. Subramaniam, B.A., B.L.
(Editor of the Journal of the Association).

Mr. M. S. Sabhesan, M.A.,
Lecturer in Botany, Christian College, Madras.

Mr. S. Rajaratnam, B.A., L.T.,
*Assistant Master, London Mission High School,
 Coimbatore.
 (Mofussil representative).*

Regional Surveys :—III

A Syllabus for a Boys' School in an Urban Centre.

Though this syllabus is ostensibly for a boys' school, there is no reason whatever why, with suitable adaptation, it may not be used for a girls' school also. The same remark obtains in regard to mofussil schools. Of course, the ideal thing in all regional surveys is to have a mixed school of girls and boys working together, for, what the boys fail to observe, the girls see, and vice-versa. In this way, the subject benefits by having all points of view brought to bear upon it, and the survey is accordingly, the more complete.

The syllabus, here worked out in more or less detail, is arranged for a school beginning with the Fourth Class and going on to the Sixth Form. But the work of the Fourth Class and Fifth Class might quite easily be spread over the whole of the Primary School. As is the case with all such syllabuses, this syllabus is not intended to be a cast-iron frame, but rather to be a suggestion of the lines along which the teacher may guide the efforts of his class, adapting and arranging the work to suit the need of the class. It

will be noticed that the teacher is to guide the class in its work, and *not* to do the work *himself*. This is to be a regional survey made *by the boys*, and the more the teacher can sink back into the back-ground the better will be the training that the boys will receive. "*Let them do it*" is a motto we must adopt, if this work is to be a success, and the teacher must never be more than "an ever present help in times of trouble," his work being that of very thorough preparation beforehand, and very skilful direction in the process of the survey. He will do nothing *until* it is impossible for the boys to accomplish it themselves, and his will be the task of reviving the lagging energies of the boys at times, and at other times of restraining the exuberance of boys whose energies are wandering off on unproductive paths.

One last word is needed before we begin to consider the syllabus proper. And that is, that this is not an effort to be coldly analysed until all the possible difficulties (many of them never materialise) are ideally overcome. They only dishearten the teacher that he fears to make the venture. This is a venture of faith to be taken up with such warm enthusiasm and determination, as will overcome all obstacles, and save our boys from the curse of the present day educational system, namely, "Indifference." This syllabus is offered therefore as a means for the rousing of that interest, without which no real education can be accomplished, and as a message of salvation to teachers, weary even unto disappointment, of a system of education that seems to arrive at nowhere but a desert of boredom for teacher and class.

We will begin therefore with the work of the Fourth Class, and it must be clearly understood that the work of any class does not necessarily finish with that class, but merely begins there and the work is cumulative. Thus the collection of pictures relating to the history, and present condition, of the town or village, which begins in the Fourth Class goes on throughout the school. In a previous article we said that often it was possible to begin the study of a district by collecting all the pictures possible of that district, and this is work that even the smallest boy can, and will delight to do. Thus in a centre like Madras, or Madura, these pictures would include views of temples and mosques and churches and other types or places of worship. Then, in Madras, the public buildings would

form another section of the pictures, and the Colleges and Schools yet another. In time the collection will have grown so big that it will have to be classified, and here is the opportunity for some corporate work on the part of the class. A Librarian, and perhaps one or two assistants, could be elected (not detailed by the teacher, please) by the class, and their work would be to arrange the pictures and cuttings in separate brown-paper folders, and pasted on stiff paper sheets. So the work will proceed merrily under the wise direction of the enthusiastic teacher, until a fairly inclusive survey of the district has been made by means of pictures etc. From time to time the teacher will manage in his lessons on Local Geography to fit in talks on some of the pictures, and perhaps a very elementary instruction in the types of architecture shown in the buildings of the pictures might be included. However, since this collection of pictures is to become part of the school collection, that part of the work might be more thoroughly done at a later stage. A very simple map of the area under consideration will then be drawn, and the position of the buildings marked upon it showing the easiest route to them from some central point, or convergence of routes. Incidentally, the boys are learning their way about their own district—a very important part of the teaching of geography.

The way is now clear for a more detailed examination of the district, and this can commence in the Fifth Class, with an elementary observation of the Soil and Water Supply of the area. Here are some specimen questions that might be given to the boys to work upon :—

1. What is the soil like in our District? (Colour, kind, etc.)
2. Is it all the same? And how far do you have to go in each direction to get different soils?
3. How deep does it go, and what do you find underneath it?
4. Find some cuttings in the neighbourhood and mark them on a given map.

(Pits, quarries, railway cuttings through hills, etc.).

5. How deep must you go, on an average, before water is found?

(A comparison of the depths of wells in the neighbourhood is very interesting, and each boy can inspect the wells in his own neighbourhood, and bring the results to school, for purposes of comparison).

This brings the work to the stage of examining the water supply, and this again is best done by a series of questions like the following:—

1. How do the people in your neighbourhood get their water supply?

(Wells, Pumps, Springs, Streams, Collection of Rainfall in tanks etc., or from the taps connected with the Company mains).

2. Mark on a given map in different colours the areas served in each of the above ways as follows:—Red, Green, Blue, Yellow.

3. From what sources do farmers (ryots) obtain water for agricultural purposes?

Note especially any ponds, and in what parts of the year they can be used.

4. Are there any industries in the district that use water:

(a) For power?

(b) For the processes of manufacture?

Mark such industries on a map.

5. From what sources do these industries obtain their water supplies---Company mains, Wells, Rivers?

This will keep the class busy for a year, and offers a wonderful scope for co-ordination of school subjects. The collection of pictures will go on as before, and the results will find their place in the school collection.

In the next article the work will be taken into the Middle School, and the syllabus of work for the Forms I, II, and III will be outlined. In the meantime, the work might be begun in the Elementary Schools, and the Primary sections of our Secondary schools. It would be very helpful if those schools taking up this work could be united in some way and pool their results and mutu-

ally solve their difficulties as they arise. For this purpose it is proposed that all schools engaged in this work, no matter in how elementary a manner, might register with the Association by sending a p. c. to The Madras Christian College School, The Esplanade, addressed "Regional Surveys." Of course, it goes without saying that any difficulties such schools may have will receive our careful attention and advice, if such difficulties are sent on a p. c. to the same address. Any difficulties of general interest will be answered in this section of the Journal so long as the Editor can find a place for such replies.

G. D. Watkins, B. Sc. (Econ.), F. R. G. S.

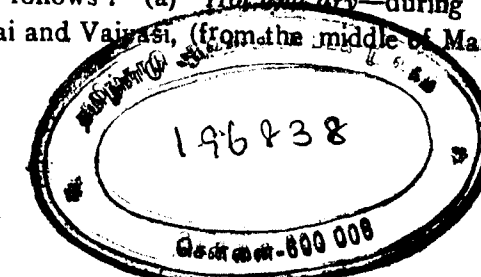
Rural Geography

II. The Seasons and Village Activities.

Climatic control is the most insistent and far-reaching of all controls, which the factors of environment have on life in general and on human life in particular; and nowhere else does it show itself so fully, so freely, and so obviously as in an Indian village. Surface and soil, man and animal, are all there; but they prove themselves inert and powerless, till the rhythmic swing of the Sun produces in its wake the wind and the rain in their season. The round of human activities and social life, resulting from the change of seasons, is one of the most interesting studies in the inter-play between man and his environment. Not less interesting is the other side of the picture, in which man is seen devising ways to get independent of the freakish bounty of Nature by means of his inventive ingenuity. The normal life and activities of the village are, however, governed by the Calendar, which practically summarises the seasonal play of the ages.

At the outset it may be pointed out that the six seasons of the Indian Calendar seem to be truer to the facts of Northern Indian Climate, and do not fit in exactly with the conditions of a Madras Village. The Seasons in South India on the East Coast may roughly be classified as follows:—(a) *Hot and dry*—during the months of Panguni, Chitrai and Vaisakhi, (from the middle of March

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to the middle of June); (b) *Hot and rainy*—during Ani, Audi and Avani, (from the middle of June to the middle of September); (c) *Cold and rainy*—during Perattasi, Arpasi and Karthikai, (from the middle of September to the middle of December); and (d) *Cold and dry*—during Margali, Tai and Masi, (from the middle of December to the middle of March). The hot and cold months occur when the Sun is north or south of the Equator, respectively. The rainy and dry months occur during Dakshinayanam (Sun's "Southern Journey") and Uttarayanam (Sun's "Northern Journey") respectively. This characterisation of the seasons, as stated above, is only a rough one; and it should be noted that there are in each season gradations of the characteristic features.

The Hindu New Year is born about the middle of April, when the Sun begins to get hotter and hotter and the water becomes scarcer by being used up or dried up. The normal life and activities of the village gradually get slackened. No doubt, certain industries connected with agriculture, such as the making of jaggery or turmeric, are carried on now; and certain favoured fields, with a better supply of water—due to situation or water works, have their third crop for the year or grow garden crops. For the *average* villager, however, it is comparatively a time of leisure.

His harvest has all been gathered; and flowers and fruits are in season both in plenty and in variety. It is now *Vasantha* or Spring of the Indian Calendar—the season of plenty and pleasure, of feasts and festivities, of marriages and matings. It is now that debts are paid off and mortgages redeemed, lands purchased or improved, wells sunk or deepened, embankments put up or canals dug, journeys and pilgrimages undertaken, or friends and relations received and entertained. The peasant now renews his thatch or rebuilds his hut against the coming rains. Bricks are now made, lime-kilns are at work, trees are felled, and fences are put up. The building trade flourishes best at this season, unhampered by rains or by the normal agricultural operations of the village.

This is also the season, best enjoyed by the urban youth; for, as it is now the time of summer vacation, they happen to visit their rural relatives—fathers, uncles or fathers-in-law. Social amenities of rural life are now much in evidence, such as cock-fighting or play-acting of Gangamma vesham or of epic stories or the singing of

Bhajana concerts, celebrating the birth of Rama. While English rural life is controlled by temperature and the English peasant has his period of rest and enjoyment during the long winter evenings, it is interesting to note that Indian rural life is controlled by moisture and that the Indian peasant has his comparative leisure and enjoyment during the dry days of summer. Very true, indeed, are the words of the poetess Auvai that without rain there is no work to be done (for the farmer).

From this torpor and lethargy, the village springs up to sudden life and activity with the first rains in June. The month of Ani witnesses the drawing up of new lease-deeds of cultivation, and the sub-registrar's office now gets a sudden increase of work. There is now also a sudden demand for cattle for the plough, and droves of them are led to and from the fair, while the middlemen ply their business merrily. The western sky is anxiously watched day after day, and at last the rain cloud appears and brings the long-expected rain. An interesting feature at this time is the sudden demand for the services of the village carpenter for mending the plough. His temporary rise to importance has been preserved in the proverb "Audi Asari, Thai Thachappayyan". The Master-carpenter of Audi (June—July) becomes the carpenter-boy of Thai (January—February).

On an auspicious day, the first plough, *Ponneru* as it is called, is drawn; and with the first rains commences usually the dry ploughing both for dry and wet crops. The village now begins to hum with new life. The half-built house, the half-cut wood, and the half-raised wall are all left off suddenly to be taken up for completion at the next slack season. The Indian peasant knows instinctively the immense importance of taking time by the forelock. The sojourner in the town hurries back to his village on the first news of rainfall.

About the time that the courts and colleges reopen in the town—the peasant, too, finds himself harnessed to his work; and for the next three months he gets deeper and deeper into it, day in, day out, ploughing and sowing, weeding and transplanting, watering and manuring. All hands are at it, male and female, young and old.

The occasional rains brought by the west winds during this season of the south-west monsoon, supplemented by the supply of spring-channels and wells, help the growth of this first crop, both dry and wet.

The monsoon turns about the time of Michaelmas or Dasara in the month of Purattasi (September—October); and now the early *Kar* crop and the dry crop are gathered in, while the *Samba* crop is in the seedling stage or is being transplanted. During the next two months, this principal paddy crop flourishes best in the monsoon rains of Arpasi and Karthi. The village is now almost completely surrounded by water. But, if the monsoon fails, all that the peasant had staked upon is lost; and his labour of three to four months as well as his little capital spent on manures, seeds, etc., is all waste; and famine stares him in the face. He runs into debt at a high rate of interest, mortgaging his land or his cattle or his petty homestead. If, on the other hand, things go well for him and the seasonal rains do not fail, he is able to gather his main crop of the year about Christmas time, which synchronises with the winter solstice. On the first of Thai (about the middle of January) the peasant celebrates his fresh harvest and the commencement of the Sun's approach towards him in the Sankranthi or Pongal (new cooking) festival. Urgent debts are paid off now, and marriages are celebrated.

This is the season which the urban visitor to the village likes best. Except for a little sharpness in the night and for a little mist in the morning, the time is very pleasant and enjoyable, without drenching rain or scorching heat, with water and verdure wherever the eye can reach, and a bracing coolness which invites and compels tramping out.

But the peasant cannot have his rest for another three months. The second crop of medium lands, the third crop of the best lands, or the second dry crop has yet to grow; and all these depend not on rains, which are almost over for the year, but on stored-up or baled-up water, while the dry crop depends partly on dew. As these crops are being gathered, the Sun gradually gets hotter and the water gets used up or dried up; and by the end of the year summer conditions of heat and drought have set in, and the cultivator has perforce to stop his normal activities.

This cycle of rural life and activity, closely coupled with and governed by the periodical swing of the seasons forms an interesting illustration of environmental control of man. But the other story of human control of environment in the rural area is no less interesting, and will be treated in the next paper.

N. Subrahmanyam, M.A., L.T.

The Geography Summer School (1926) at Chittoor.

The teacher of Geography is often at a disadvantage when compared with the teacher of History or Mathematics. The latter when preparing for their professional career have to deal with many problems of method, but they are sure of their subject matter. This is not the case with the teacher of Geography, at least in a considerable number of cases. The cause for this state of things is not far to seek. The kind of Geography demanded from the teacher in these days is different from that which he was taught in his own school days and consequently when he comes to his professional training he is faced with the double problem of learning new subject matter as well as teaching methods. In addition to the L. T. Students there are many teachers who are already in schools where they are under the necessity of learning their subject matter before they can give a lesson. This is a difficult situation; and when it was proposed to hold a ten days "Summer School" or "Refresher Course," twenty-four students and teachers availed themselves of the opportunity of spending a short time together concentrating on the one subject and of learning some new methods of teaching Geography.

The membership of the school was limited to Graduate women or women L. T. Students. The place chosen was Chittoor partly because it was possible to get practical work in the Reserved Forest around and partly because accommodation was offered in the Sherman Memorial School. The aim of the school throughout its various sessions was to combine a concentrated study of the one subject in

the lecture room with practical work in the laboratory and in the country around.

The work was strenuous and interesting. The morning began with an hour's lecture on the Geography of India from the human standpoint. This was followed by an hour on the local geography of the Chittoor area, as an example of what it is possible to do with any small area, and then by an hour of practical work on maps, charts, diagrams, etc. In the afternoon an hour was given to Story Telling Geography and another hour to the making of models that could be used as handwork in connection with the stories. In addition to these definite lecture periods the students kept a three hourly weather record and on one afternoon were shown the principle of map-making with a plane-table. In the cool of the evening an expedition was arranged to some part of the Reserved Forest each day and the students were able to get practice in reading a 1" O. S. Map on the ground. This was correlated with the work on the Local Area.

As far as possible provision was made for teachers of all classes of a school. The work done on India was adapted to the teaching of the Middle School Forms and the practical work consisted in the making of maps and diagrams such as would be expected from children in these forms. The Local Area was treated in some detail as would be expected from a High School Form, say the Vth or VIth. Here the practical work consisted in making rainfall and vegetation maps and diagrams illustrating the relative crops found within the area from data supplied from Government Returns of various kinds. The afternoon work on the Story Telling Geography was of course adapted to the youngest children. This was a most popular course and some very good handwork models were constructed from material available to every teacher of small children and in such a fashion as little children could manage. The Weather Records were such as would be expected from a Middle School Form but various ways of recording were shown such as could be adapted to the use of small children or High School classes.

In addition to these regular lectures a discussion was held on the framing of syllabuses in which considerable emphasis was placed on different ways of teaching a course on World Geography. Also

two lectures were given on Climate in which various difficulties were cleared up. Also a long expedition was arranged and carried out to illustrate the way to conduct a Geographical Excursion with say a Vth or VIth Form group who are studying their Local Area in detail.

It was a most enjoyable ten days and everyone gained something. Not the least of the gain went to those who were not expecting to teach the subject as a "special" but who had come in the hope that their interest in it would be stimulated. Geography is now a living subject to them and they will be able to give an intelligent helping hand to the Mistress in their school to whose lot it falls to teach it as a special subject. It is hoped to repeat the experiment this September with teachers of the S.S.L.C. Grade.

Miss. E. D. Birdseye. B. Sc.

News and Notes.

The Madras University has confirmed those new Regulations which include Geography as a subject in Part III of its remodelled Intermediate Course. This means simply that the obstacle hitherto encountered at the very threshold, due to the University's non-recognition of the subject, has been removed. The permission now accorded will, however, remain a dead letter unless Constituent Colleges avail themselves of it and make provision for teaching it and adequate provision at that. The B. Sc. Course, for instance, was given recognition by the Madras University after thirty years' struggle. It is about ten years since then, but, as no candidate can appear except through a college, and as no college (excepting the Nizam's College) has made provision for it, the B. Sc. has remained simply a University Calendar subject like Pali and Hebrew, and nothing more.

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It is, therefore, doubly gratifying to find that the Madras Christian College has promptly given the right lead in the matter. Arrangements have been made there for teaching Geography in the

Intermediate Course; and, what is more, every facility has been given to the serious student to include Geography among the three subjects he is to study in Part III, by allowing him to combine it with *any* other two subjects.

The St. Joseph's College, Trichinopoly, and the Findlay College, Mannargudi have, we understand, similarly provided for courses in Geography. It remains for Government Colleges to fall into line with these.

* * * *

The reform in High Schools is yet to come. That reform has been hanging fire, for how many years we cannot tell. Wooden, mechanical and rigid rules dominated the Matriculation till 1911; the Secondary-School-Leaving-Certificate course which has virtually supplanted it since then, has been governed by ever-changing rules. So wide, so practical and so comprehensive a subject is Geography that the college course in it can be built only on the broad foundations that have been laid in the High School. Geography has still to secure its rightful place in the High Schools of the Presidency.

* * * *

It may not be amiss to caution the student that Geography is a subject that cannot be got up by the prevalent methods of getting up by rote some one or other of text-books however good they may be. It would be for him an excellent discipline in scientific methods to read and understand the facts of his environment which is, as it were, *the book and the laboratory* of Geography. Excursions, pictures, lantern slides, maps, charts and plans, models and diagrams, travel books and descriptions of scenery, what a fascinating study these make of Geography. From first to last, the interest never flags and all the while one seeks and finds instruction from them.

Madras Intermediate Geography Syllabus.

I. *The Physical basis of Geography*—A general treatment of the following topics :—

- (a) The atmosphere—chief movements of air and water and the resulting types of weather and climate including under this insolation and temperature—atmospheric pressure and world winds—precipitation—storms—local winds.
- (b) The oceans—area and depth—continental shelf and slope—deeps—composition of sea water—origin of salt and distribution of salinity—temperature—movement of the ocean waves and tides—currents—deposits on the ocean floor—coral reefs and islands.
- (c) The land—materials of the earth's crust and the forces that shape it—agencies of disintegration and reconstruction—process of earth sculpture—rivers and the development of river systems—underground water—snow and ice—wind as an agent of transport and deposition—volcanoes—lakes—shore lines deltas and estuaries.

II. *General Regional Geography on a World Basis* :—

Structure—climate—vegetation—a study of the major natural regions with reference to prevailing economic conditions—plant and animal life—distribution of population—localisation of industry—transport—trade centres and routes.

III. *Detailed Study of Eurasia* :—

Structural features and relief—climate—vegetation—communications and population of Eurasia as a whole and the characteristic geographical features of the S. W. Highlands of Asia. The monsoon regions—mid-Asian deserts—tundra, forest lands and steppe lands of Eurasia—the British Isles—the central plains of Europe—the central highlands of Europe—the Mediterranean region.

IV. *Practical Work* :—

- (a) Shape of the earth—determination of position—angular measurement and latitude—parallels and meridians—Greenwich time and Indian standard time—a study of the simple types of map projection.
- (b) Study and interpretation of Indian ordnance maps—methods of showing relief.
- (c) Principles of field mapping by plane table, prismatic compass, clinometer; the use of a levelling staff and aneroid barometer in determining height.
- (d) Collection and tabulation of data—diagrammatic and cartographic methods of expression.

A list of books is appended which indicate the standard of work required.

General and Regional Geography.	Unstead and Taylor (George Philip & Son).
A Handbook of Geography	... L. Brooks (University of London Press).
The Indian Empire	... Dudley Stamp, (Longmans & Co.).
Text-book of Geography	... A. W. Andrews (Edward Arnold & Co.).
Economic Geography of the British Empire.	C. B. Thurston (University of London Press).
Geography of Asia	... J. Martin (Macmillan & Co.).
A Geography of Europe	... T. Alford Smith (Macmillan & Co.).
Physiographical Introduction	... A. J. Herbertson (Oxford University Press).
Physical Geography	... P. Lake (George Philip & Son).
Maps and Survey	... A. R. Hinks (Cambridge University Press).
A little book of map projection	... W. Garnett (George Philip & Son).

Reviews.

Longman's Regional Geographies of India :
The Indian Empire.

Part I. North-East India. By F. G. French and L. Dudley Stamp, pp. 184, Maps and Diagrams 92, Price Re. 1.

Part II. Peninsular India. By the same authors, pp. 160, Maps and Diagrams 77, Price Re. 1.

Part III. North-West India. By the same authors, pp. 166, Maps and Diagrams 80, Price Re. 1.

Part IV. India, Burma and Ceylon. By L. Dudley Smith, pp. 348, Maps and Diagrams 176, Price Re. 1 as. 8.

Published by Messrs. Longmans, Green and Co., Madras.

Messrs. Longmans and Co., foreseeing the place Modern Geography is about to win for itself in the High Schools in India, have seized time by the forelock, and have arranged for the issue of text-books suitable for use in the Middle Schools and High Schools in India. Messrs. French and Stamp, who have done these text-books, have steadily kept in view the curriculum and the syllabus prescribed by Authority and the examination papers which define the standard. They have been conscious that the persons who are to be taught by their books are the teachers no less than the pupils; and they further claim to hold the teacher with model questions at the end of each chapter. In a subject so wide as Geography, opinion may differ regarding the mass of details that should go in or the relative importance of the various subjects that should be dealt with; but there can be no two opinions about the utility of the sketch-maps and diagrams with which these books abound or about the methods of treatment which are modern and which invest the reading of Geography with interest and freshness. The guidance given to the teacher might well have been amplified by directions in respect of practical work. It is hoped that in the next edition there will be avoided the typographical errors that have crept in and also such errors as 'South of the town of Arcot three rivers, the Poini, the

Palar, and the Cheyyar have been dammed'. 'Temperature means the amount of heat or cold'. These books are not cram-books; and, on the whole, they make good working text-books well-suited for their purpose.

"*First Steps in World Geography*".—By Elsa C. Stamp, pp. 144, with 64 maps, figures and illustrations. Published by Longmans, Green and Co., Price as. 14.

This is a good introduction to the study of Geography, calculated to excite the curiosity of the pupil and sustain his interest. The method followed has been to take up a common article in everyday use like the silver rupee or a cake of soap and trace it to its source. The results of the study, whereby one is taken from one's own place to the very ends of the earth, are gathered up in the later chapters. The book is written in simple English and well-illustrated.

"*The World*".—By L. Dudley Stamp, 647 pp., 10 coloured maps and 414 diagrams and illustrations. Published by Longmans Green and Co., Price Rs. 3.

This book is intended to provide the Indian student with a cheap text-book on "The World," after his completing the Regional study of India. Mr. Stamp has his eye on the needs of the examination going student. The chief merit of the book consists in the numerous diagrams and sketch-maps running to over 400.

"*How to teach Geography*".—By L. Dudley Stamp and Elsa C. Stamp, 99 pp., 19 maps and diagrams. Published by Longmans, Green and Co., Price Re. 1, as. 8.

This book is not of the order of similar books by Fairgrieve or Wallis. The Stamps address themselves here to the teachers of Indian Middle Schools and High Schools, and in well-planned chapters give them a few clear-cut directions as to how they should 'do' Geography in the modern way. It is this piquant definiteness that gives the book its value. It is somewhat diverting to read in the very text of the chapters the several advertisements that are found scattered there.

"*Our World: A Human Geography*." By C. Morrison, pp. 668 with 198 illustrations and special maps and 8 coloured maps. Macmillan and Co., Price Rs. 3.

This book is written to meet the need of a text-book of Modern Geography for the use of Indian Schools and Colleges. The text is written in simple English; and the matter is well-chosen and well-arranged so as to enable the student to obtain a clear knowledge of the subject. But there ought to have been many more sketch-maps and diagrams to bring the text home; and the publishers would do well to have them prepared and issue them as a supplement.

"*Birds and Bird Life*"—By P. Raghavendra Rao (in Telugu). pp. 81 with 28 illustrations. R. Venkateshwar and Co., Madras, Price 8 annas.

The author is to be congratulated on his effort at describing to Telugu boys and girls in their own tongue the wonders of bird-life. While, in English, such books are ever so many, this stands out as almost the only one of its kind in Telugu. The book describes the structure and functions of the several parts, and has a number of illustrations; it is written in simple (standard) Telugu. In a popular book like this, there ought to be more pictures of birds and descriptions of their habits. We hope to see these done in the second edition.

Books and Journals received.

'First Steps in World Geography' by Elsa C. Stamp. Longmans, Green and Co., 1927, Price 14 as.

'The World' by L. Dudley Stamp. Longmans, Green and Co. 1927, Price 3 Rs.

'How to teach Geography' by L. Dudley Stamp and Elsa C Stamp, 1927, Price 1 Re. 8 as.

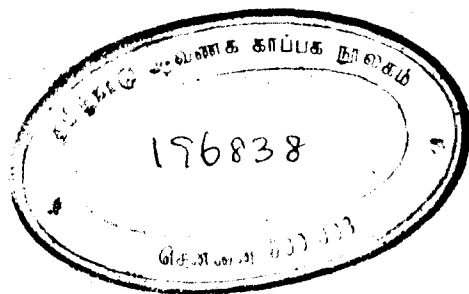
'Our World' A Human Geography, by C. Morrison, pp. 668 with 198, illustrations and Special maps and 8 coloured maps. Macmillan and Co., Price 3 Rs.

Benares Hindu College Magazine. Vol. XXVII, No. 1. January 1927.

The Educational Review. Vol. XXXIII, No. 3, March 1927.

Rural India. Vol. I. Nos. 8 to 12, February to June 1927.

The Quarterly Journal of the Andhra Historical Research Society. Vol. I. Parts III and IV, January and April, 1927.



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7. A person shall become an ordinary member upon the proposal by a member, the seconding by another member and approval by the council by the majority thereof present at its meeting. He shall pay an annual subscription of rupees *two* payable in one instalment or in two equal half-yearly instalments at his option.

8. Those who pay an amount of hundred rupees in two years become LIFE MEMBERS, and they shall be exempt from payment of any further subscriptions.

Officers.

9. There shall be the following officers for the Association :—

Patrons, Vice-Patrons, President, one or more Vice-Presidents, Secretary and Treasurer.

Management.

10. The management of the Association shall vest in a working Council, which shall consist of the president, the vice-presidents, the secretary and the treasurer as ex-officio members, and four others elected by the general body, one at least of whom shall be from amongst the mofussil members.

11. The *Quorum* for a meeting of the working council shall be three.

The Powers and Duties of the Working Council.

12. The duties of the Working Council shall be :—

- (A) To receive and approve all applications for membership ;
- (B) To arrange for the annual and other meetings of the Association ;
- (C) To provide for the custody and utilisation of the funds and other property of the Association ;
- (D) To appoint committees and assign duties to them ;
- (E) To act in all respects on behalf of and with the powers of the general body, except when it is actually sitting.

13. The working council shall have the powers, subject to the veto of the general body, to issue, modify or rescind bye-laws, for the regulation of the work and activities of the Association.

Miscellaneous.

14. The official year of the Association shall be from 1st January to 31st December, and shall be divided into two sessions.

15. The Annual Meeting of the Association shall be held in December, when the officers for the coming year shall be elected.

16. All life membership subscriptions, all unspecified donations and one-third of all ordinary subscriptions shall be carried to the capital fund of the Association.

THE MADRAS GEOGRAPHICAL ASSOCIATION, MADRAS.

THE WORKING COUNCIL.

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Treasurer.

Mr. D. W. Wolfinden, B.A., L.T.,
Assistant to the Headmaster, Bishop Corrie's High School, Madras.

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2. Mr. M. Subramaniam, B.A., B.L.,
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4. Mr. A. Aaron, B.A., L.T.,
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All remittances should be sent to—

The Treasurer,
The Madras Geographical Association,
Y. M. C. A., Vepery, Madras.

All communications should be addressed to—

The Secretary,
The Madras Geographical Association,
Y. M. C. A., Vepery, Madras.