During the following 30 days, 58 marked prawns were recovered through fishermen who recaptured these from different places as shown in Fig. 2; as many as 21 were taken off Ganapatipule, which is the most heavily fished area.

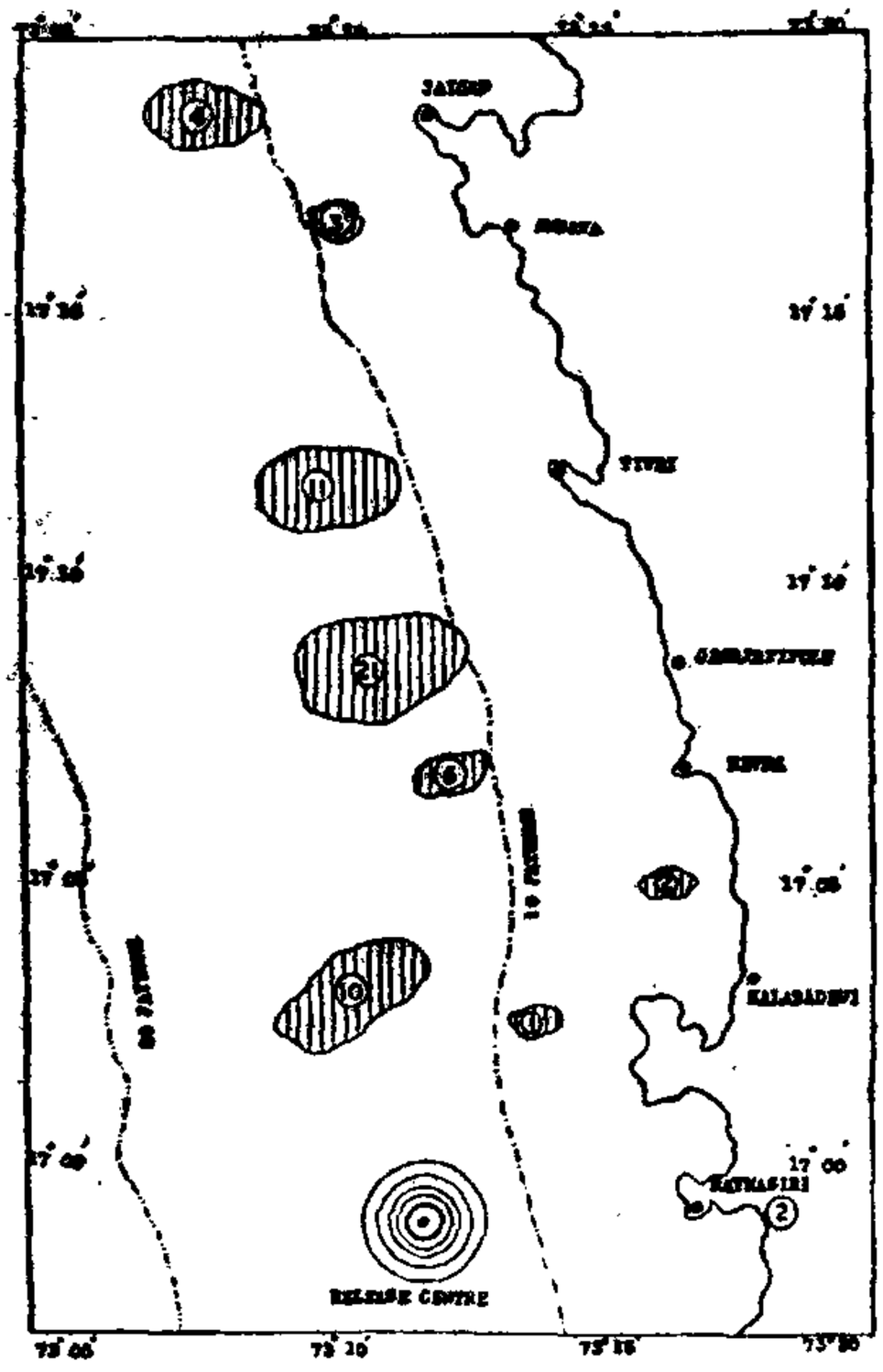

FIG. 2. Map showing recoveries of stained shrimps. The marked shrimps recaptured are indicated by numbers in the enclosed areas.

It is interesting to note that no prawn was captured south of the releasing centre. Returns of marked prawns seem to indicate that there is a northward migration of prawns during February to March. As no trawling is undertaken north of Jaigad, further extension of migration could not be located.

Record of the first recovery came off Jaigad on the sixth day after release, covering a distance of 18 nautical miles, giving an average rate of movement of three miles per day. Retention of Trypan Blue in the branchial region of prawn recaptured on the thirtieth day showed that the use of this stain is helpful in "tagging" or marking prawns on large scales as done in fishes. The details of this investigation are being published elsewhere.

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Marine Biological Research Station, Ratnagiri, Maharashtra State, August 14, 1967. M. R. RANADE.

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KATROLAITES GEN. NOV., A NEW FOSSIL FROM THE JURASSIC ROCKS OF KUTCH, INDIA

THE present note deals with *Katrolaites* gen. nov., a new spore genus recovered from the Katrol shales (Jurassic) of Kutch, Gujarat, India. The shales are grey to buff in colour and were macerated with commercial nitric acid (60%) followed by hydrofluoric acid (40%). Potassium hydroxide (5%) solution was used for 3-4 minutes subsequently. The slides were prepared with polyvenyl alcohol and mounted in Canada balsam.

GENUS—*Katrolaites* GEN. NOV.

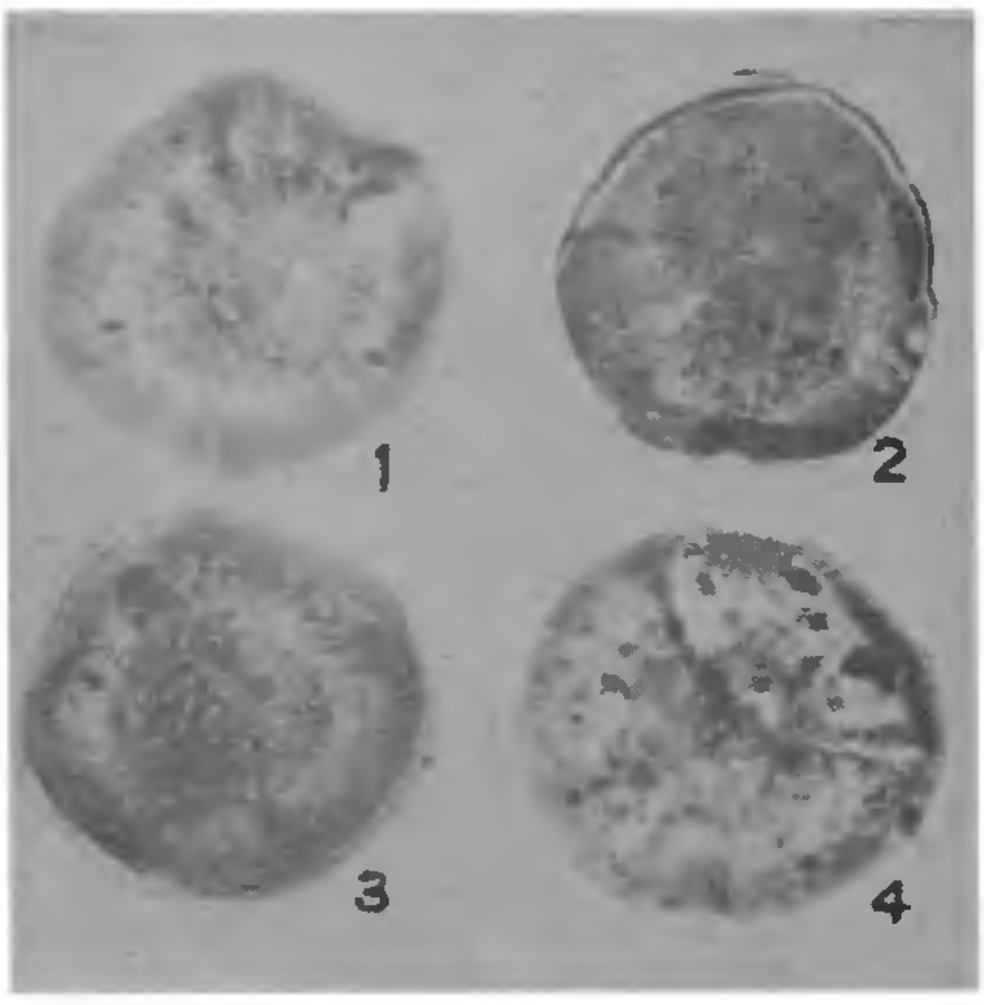
Type Species—*Katrolaites kutchensis* Gen. et Sp. Nov.

Generic Diagnosis.—Circular—sub-circular. Alete. Exine differentially thickened along equator; distally operculate, operculum mostly conspicuous.

Description.—Mostly circular, sometimes sub-circular in polar view. Tetragonal compression mark sometimes present, but not accompanied by sutures (Fig. 4). Exine upto 4 μ thick, dense at equator and progressively thinning towards polar region; intrapunctate. Operculum on distal side, easily distinguishable. Exine radially folded along the margin of operculum.

Comparison.—*Exesipollenites* Balme (1957)[1] closely resembles the present genus in shape, differential thickening of the exine and absence of haptotypic mark. The former can, however, be distinguished by its presence of circular depression in the middle region and lævigate-granulose exine. *Spheropollenites* Couper (1958)[2] also approximates the present genus in shape, but can readily be distinguished by its

smaller size range and presence of depression (? pore) in the central region. *Distalanulisporites* Klaus (1960)[3] is roundly triangular in shape, possesses a distinct, well-developed trilete mark and a circular annulus in the middle. *Cooksonites* Pocock (1962)[4] is hilate and has a well-developed cingulum. *Coptospora* Dettmann (1963)[5] is as asymmetrically thickened along the equator and distinctly hilate while the present genus is operculate. *Classopollis* (Pflug) Pocock and Jansonius (1961)[6] and *Gliscopollis* Venkatachala (1966)[7] both possess equatorial tenuitas on the distal side bordering the operculum. *Granuloperculatipollis* Venkatachala and Goczan (1964)[8] is distinguished by the presence of the distal pore and the granulose ornamentation. *Katrolaites* proposed here is differentiated from all the known genera by its circular shape, more or less differentially thickened, lævigate and intrapunctate exine, absence of haptotypic mark and presence of an operculum in the distal polar region.



FIGS. 1–4. *Katrolaites kutchensis* gen. et sp. nov. Fig. 1. Holotype, note the distinct operculum and radial folds, *ca* × 500. Fig. 4. Note the tetragonal depression mark but not associated with suture, *ca*., × 500.

Remarks.—Though closely comparable to *Coptospora* Dettmann (*l.c.*), the genus *Katrolaites* is readily distinguishable. Doubt may arise as to the nature of the opening (hilum) in *Coptospora*. It may be interpreted that by the detachment of the operculum in *Katrolaites* *Coptospora*-like forms can be resulted. The distal opening in *Coptospora* is mostly ill-defined, not confronting to any regular shape, while the operculum in *Katrolaites* is mostly well defined and circular. We have not observed any spore with detached operculum.

Katrolaites kutchensis Sp. Nov.

Holotype—Fig. 1. Size 64 × 58 μ.

Type Locality.—Bandra, near Bhuj, Katrol Stage (Jurassic), Gujarat, India.

Specific Diagnosis.—Circular, 56–66 μ. Exine ± differentially thickened, lævigate and intrapunctate. Operculate, operculum on distal side, well defined.

Description.—Mostly circular, sometimes subcircular. Tetragonal mark present in some specimens. Exine 2-3 μ thick, differentially thickened at the equatorial region. Operculum circular—subcircular, 30–38 × 26–34 μ, mostly confronting with the general shape of the spores. Operculum intact, sometimes with small, radial folds on the proximal side.

Birbal Sahni Institute of Palæobotany, Lucknow, *August* 14, 1967.

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R. K. Kar.

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ISOLATION OF MONOCROTALINE AND CRISPATINE FROM *CROTALARIA LECHNAULTII*

Monocrotaline occurs in several other species of Crotalaria while Crispatine has been reported so far only from C. *crispata*.[1]

A sample of the seeds assayed by the method of Culvenor and Smith[2] was found to contain 5·25% tertiary bases and 0·67% *N. oxides*. The dehusked powdered seeds of *C. lechnaultii* (300 g.) were defatted with *n*-hexane. The petroleum ether exhausted residue was further extracted with ethanol (95%) in a Soxhlet apparatus for 35 hours. The concentrated mass (60 g.) on TLC[3] using silica gel G and chloroform, methanol, ammonia (85 : 14 : 1) showed 3 spots R_f 0·0, 0·32, 0·40 and on paper chromatogram 0·0, 0·43, 0·61 (*n*-Butanol : 5% acetic acid, upper phase). The residue was triturated with dilute sulphuric acid (5% *v/v*) basified and extracted with chloroform. Removal of chloro-