



## GEOCHRONOLOGY AND INTERNAL STRUCTURE OF THE SOUTH EASTERN NEW CALEDONIAN FRINGING REEFS. NEOTECTONIC FEATURES AND SEA LEVEL VARIATIONS.

Lecolle, Jean F., Cabioch, Guy, Centre ORSTOM BP A5 Nouméa Cédex Nouvelle-Calédonie.

New Caledonian south east place is characterized by a 6 to 10 meter ancient uplifted reef. A notch of 2 to 3 meter high extends along the coast for about 25 km. Thirteen core-holes have been realised and studied through 4 different living reef flats.

Microfacies results and C14 dates show Holocene-Pleistocene unconformity and some minor discontinuities. At the bottom of one drill, near the reef front, a sample of non-altered coral measured at 7 to 8 meter depth produced an age of 5360 years BP. The notch is dated by some corals that lived inside of it, and their age of 5400 years BP, corresponds to the Holocene high sea level in the south west Pacific.

Different drills allow to define hypotheses about eustatic variations and neotectonic evolution of this coast.

The one plausible hypothesis could be that, there was an uplift of the inner part of the reef, followed by collapses of the outer part of it and this, up to the barrier reef. These simultaneous movements and the erosion gave the actual morphology of this coast.

A second hypothesis is based on some observations in the south part of new caledonian-Ile des Pins. The remains of the 120,000 years sea level form now an old terrace, lying at 6 to 10 meter above the living reef flat. A slight coastal subsidence which increases up to barrier reef, and the erosion hollowed out the notch and gave the actual morphology.

## Séances générales

- A. Stratigraphie du Quaternaire
  - 1. Séquences marines
  - 2. Séquences non marines
  - 3. Téphrochronologie
  - 4. Géochronologie
  - 5. Magnétostratigraphie
  - 6. Limite entre le Pliocène et le Pléistocène
- B. Environnements du Quaternaire
  - 1. Paléoclimatologie
  - 2. Paléohydrologie
  - 3. Paléolimnologie
  - 4. Paléopédologie
  - 5. Erosion et sédimentation glaciaires
  - 6. Phénomènes périglaciaires
  - 7. Loess
  - 8. Tectonique et volcanisme
  - 9. Lignes de rivage
  - 10. Géochimie isotopique
  - 11. Autres phénomènes géomorphologiques ou géologiques
- C. Faune et flore du Quaternaire
  - 1. Paléocécologie des invertébrés
  - 2. Paléocécologie des vertébrés
  - 3. Palynologie
  - 4. Paléobotanique
  - 5. Extinctions au Quaternaire
  - 6. Paléontologie ou paléocécologie générales
- D. Les environnements actuels considérés comme analogues de ceux du Quaternaire
  - 1. Glaciologie et processus glaciaire
  - 2. Pergélisol et processus périglaciaires
  - 3. Altération et glissements de terrain
  - 4. Pédologie
  - 5. Processus éoliens
  - 6. Distribution moderne de la flore et de la faune
  - 7. Climatologie
  - 8. Autre processus
- E. Corrélation
  - 1. Problèmes
  - 2. Corrélations interrégionales
- F. L'homme et le Quaternaire
  - 1. Paléontologie humaine
  - 2. Archéologie
  - 3. L'homme et les paléoenvironnements
- G. Ressources en rapport avec le Quaternaire
  - 1. Télédétection
  - 2. Gîtes minéraux du Quaternaire
  - 3. Hydrogéologie et séquences du Quaternaire
  - 4. Problèmes de génie reliés aux dépôts terrestres du Quaternaire
  - 5. Problèmes de génie reliés aux dépôts offshore du Quaternaire
  - 6. Protection du milieu naturel
- H. Traitement des données et banques de données
  - 1. Modélisation de l'océan et de l'atmosphère
  - 2. Modélisation phytogéographique et zoogéographique
  - 3. Types de banques de données, problèmes, échanges

O.R.S.T.O.M. Fonds Documentaire

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Cote B

EXI

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XII<sup>th</sup> INQUA CONGRESS  
XII<sup>e</sup> CONGRÈS de L'INQUA

Ottawa, Canada  
1987

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JEAN LECOLLE  
SECTION GEOLOGIE  
CENTRE O.R.S.T.O.M.  
BP A5  
NOUMEA CEDEX  
NEW CALEDONIA

Dear Colleague:

The program committee for INQUA '87 has accepted your contribution and assigned it to an oral session as summarised below:

Title: Geochronology and Internal Structure of the South Eastern New Caledonian Fringing Reefs. Neotectonic Features and Sea Level Variations, J.F. LECOLLE, G. CABIOCH, Centre ORSTOM, Nouméa, Nouvelle-Calédonie

Session or Symposium Number: SS16B

Title of Session or Symposium: SEA LEVEL - GEODYNAMICS AND CLIMATE

Time of Oral Presentation: Tuesday, 4 August 14:40

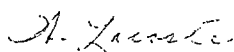
The room assignment will be given in the program distributed at the meeting. We remind you that 15 minutes is available for this oral presentation; it will be followed by five minutes of discussion. This schedule will be strictly adhered to and speakers who exceed their time will be cut off. The meeting room is equipped with two standard 35mm slide projectors and an overhead projector, together with two screens. Instructions on how to prepare your slides and get them to the projectionist will be included in the registration package distributed at the meeting. All speakers should meet with their session chairmen in the assigned meeting room at least 30 minutes prior to the start of their session. Detailed information and advice on making an oral presentation is given on page 28 of the second circular.

Please inform the conference organisers immediately if you are unable to attend the conference and make your presentation.

We also wish to take this opportunity to remind you that if you have not already registered you should do so immediately and take advantage of the reduced registration fee if sent before April 30th 1987. We also urge you to complete and send the Request for Accommodation as accommodation will be limited at the time of the Congress. If you require additional forms, please let us know immediately. There is still space available in most field trips: registration for these should be completed immediately.

We look forward to meeting you in Ottawa.

Yours Sincerely,



H. Lacoste

Tel: (613) 993-9009

Telex: 053-3145