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## Introduction

In the last decades, eggshells of egg from big reptiles have been studied by many researchers, not just to describe the eggshell (and be able to compare them to old lineages that have once inhabited our planet), but also to understand how the egg provides to the embryo a specific conditions during incubation. Previous studies have described and characterized normal and pathologic *Caiman latirostris* eggshells, we also have evaluated how the eggshell changes during incubation (Fernandez et al., 2013; Simoncini et al., 2014). In a study relating temperature variation and eggshell structures of successful eggs, we observed empty structures not previously described that we called “intracascara space”. The objective of this study is to describe new structure of *Caiman latirostris* eggshells.

## Method

We sampled five *Caiman latirostris* nests. In each nest, we took two samples of the eggshell per egg, one from pole and one from equator region. We observed those eggshells with Labklass binocular lupe and Phenom PRO scanning electronic microscope. Previous to take the samples, we measured each egg, their thickness with and without ornamentation, and density of pore openings.

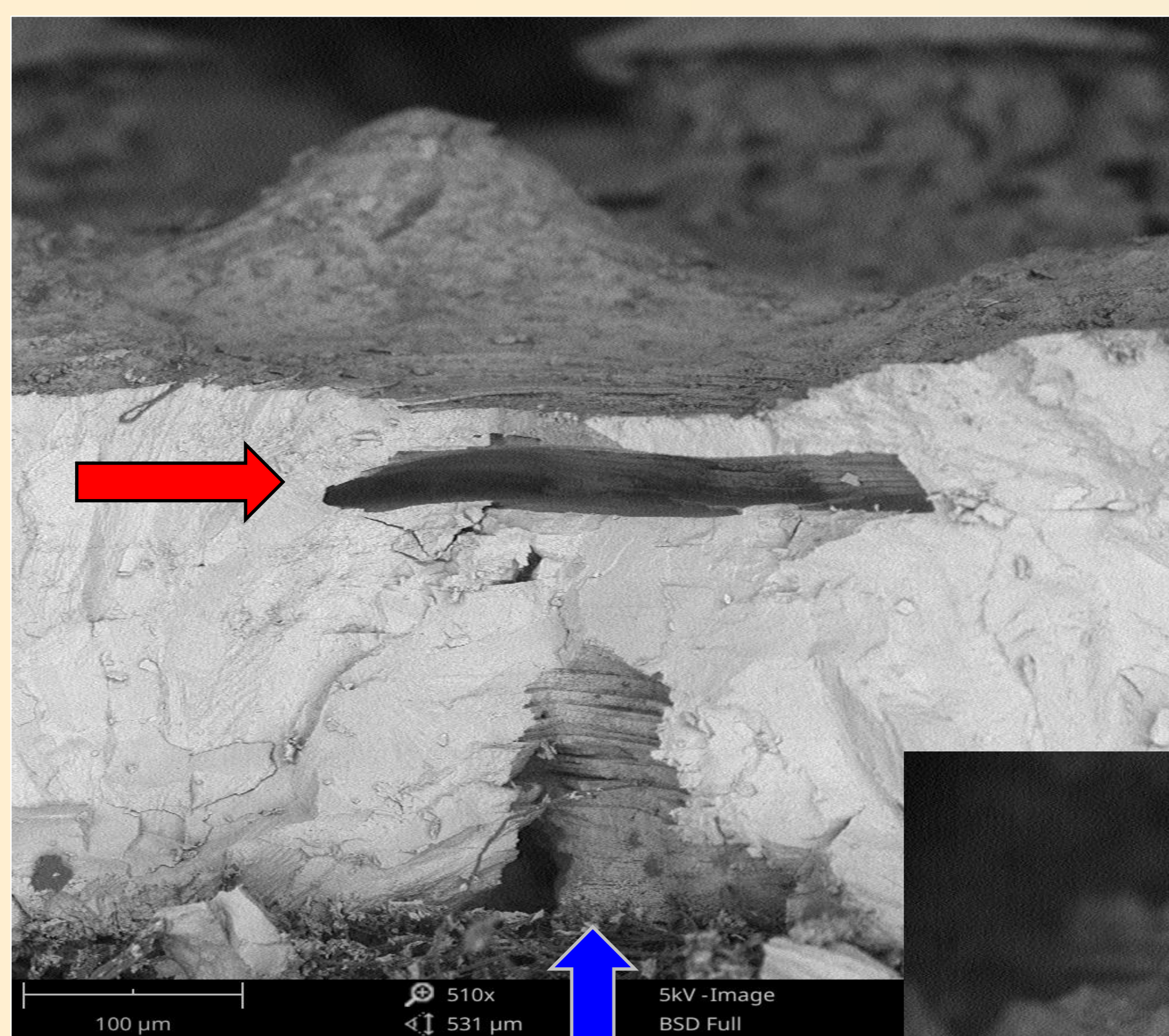


Fig. 2: SEM picture showing radial section of the eggshell; arrow points the intracascara space, this space at the beginning is not connected with the cone beneath.

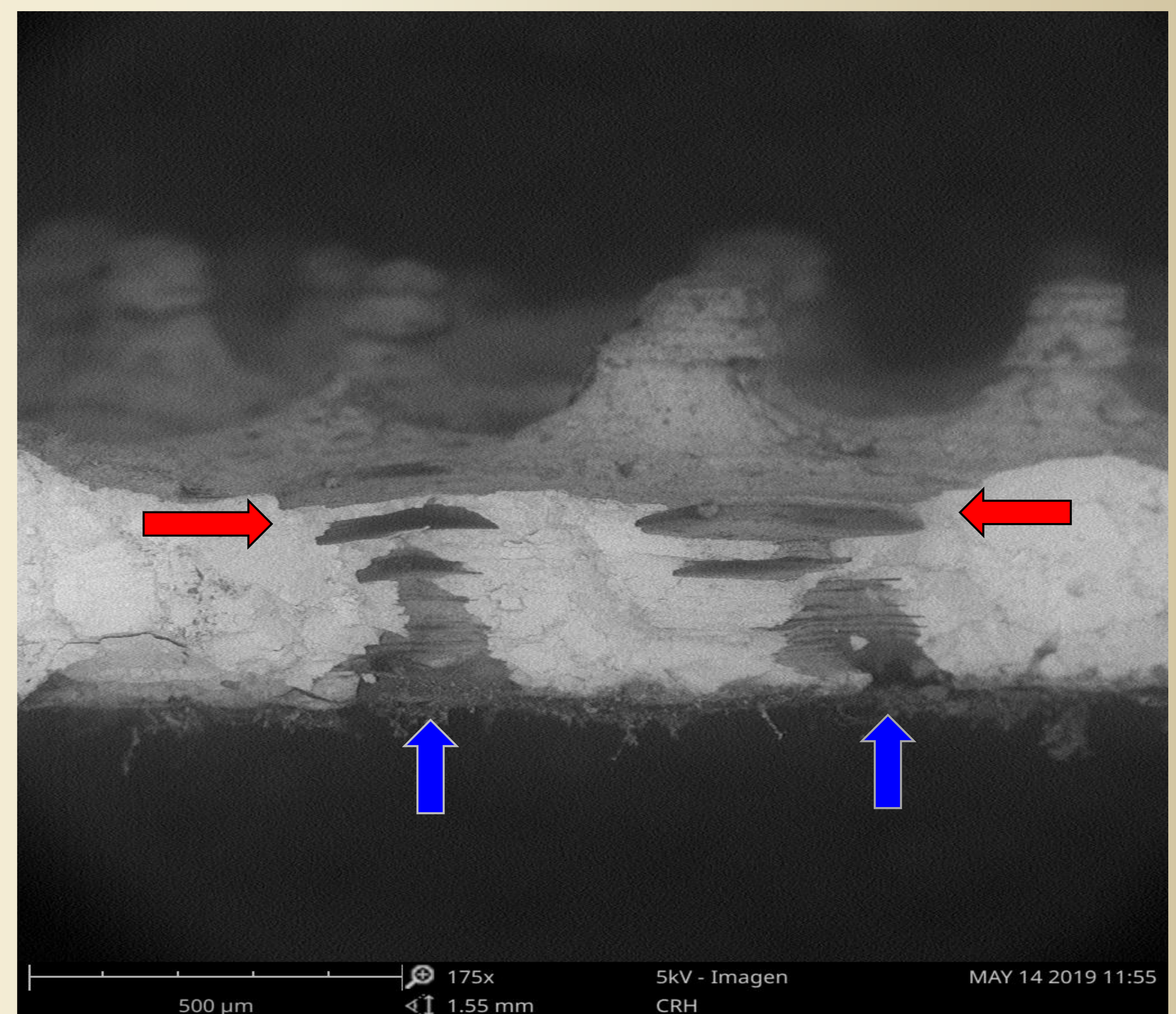
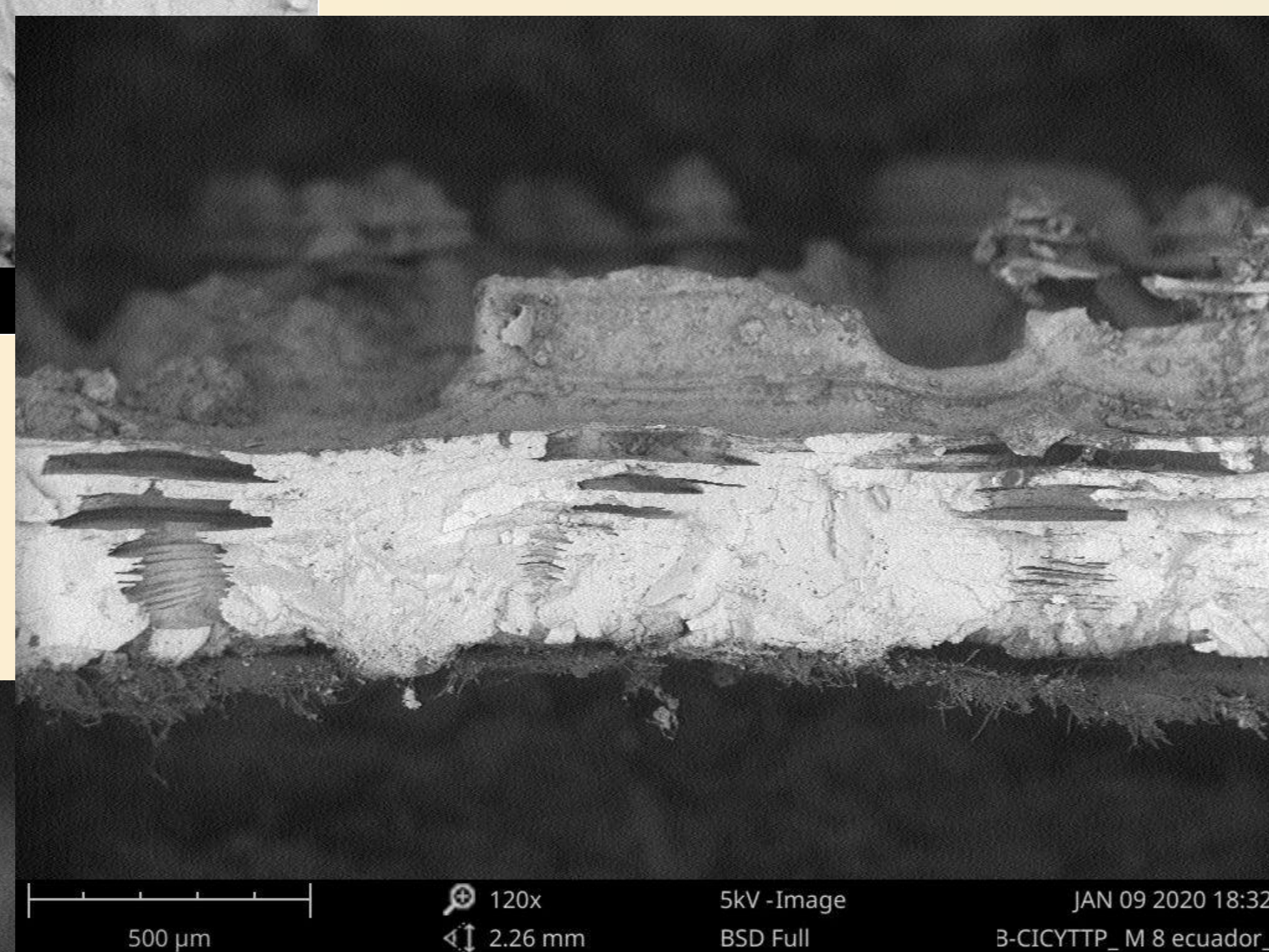


Fig. 1: SEM picture, showing to contiguous intracascara spaces and cones; red arrows points are chambers, blue arrows points are cones.

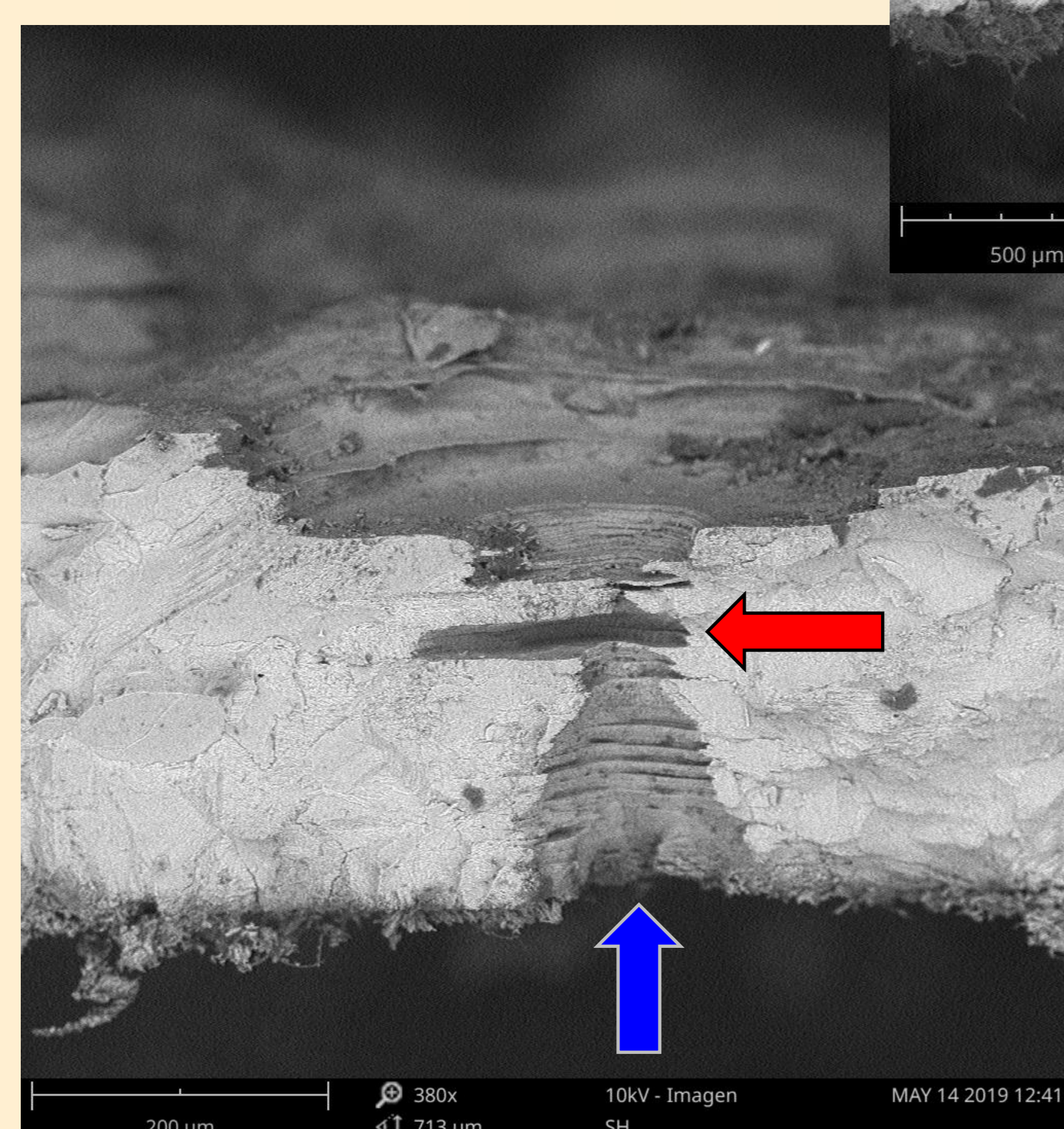


Fig. 3: SEM picture showing other radial section of the eggshell; some space is connected with the cone beneath.

Fig. 4: SEM picture of the eggshell showing one space connected with the cone.

## Results and discussion

In the eggs of the five nests studied we found hollow areas in the eggshell where calcite was absent; we refer to these as “intracascara spaces”, which have not been described for any species of crocodile so far. They are located immediately above the pores and if the pore is not completely open, this space has no exit to the outside. In previous studies (Simoncini et al., 2014), we shown that during incubation, new pores appeared and make the egg more porous and fragile. We hypothesized that these intracascara spaces could be weak points, to facilitate pore opening. These are formed from calcium deposition of female in the egg.

## Bibliography

- Fernández M. S. et al. (2013). *Naturwissenschaften*, 100 (5), 451–457.  
Simoncini M. S. et al. (2014). *Revista Mexicana de Biodiversidad*, 85, 78–83.