

species are kept up, representative as it were of each other. When there is such a representation, the minimum of one species usually commences before that of which it is representative has attained its correspondent minimum. Forms of representative species are similar, often only to be distinguished by critical examination.”<sup>1</sup>

As an illustration of what is meant by the law of ‘representation,’ I may cite a very curious case mentioned by Mr. Verril and Mr. Alexander Agassiz. On either side of the Isthmus of Panama the Echinoderm order *Echinidea*, the sea-urchins, are abundant; but the species found on the two sides of the Isthmus are distinct, although they belong almost universally to the same genera, and in most cases each genus is represented by species on each side which resemble one another so closely in habit and appearance as to be at first sight hardly distinguishable. I arrange a few of the most marked of these from the Caribbean and Panamic sides of the Isthmus in parallel columns.

EASTERN FAUNA.

*Cidaris annulata*, GRAY.  
*Diadema antillarum*, PHIL.  
*Echinocidaris punctulata*, DESML.  
*Echinometra michelini*, DES.  
 „ *viridis*, A. AG.  
*Lytechinus variegatus*, A. AG.  
  
*Tripneustes ventricosus*, AG.  
*Stolonoclypus ravenellii*, A. AG.  
*Mellita testudinata*, KL.

WESTERN FAUNA.

*Cidaris thouarsii*, VAL.  
*Diadema mexicanum*, A. AG.  
*Echinocidaris stellata*, AG.  
*Echinometra van brunti*, A. AG.  
 „ *rupicola*, A. AG.  
*Lytechinus semituberculatus*,  
 A. AG.  
*Tripneustes depressus*, A. AG.  
*Stolonoclypus rotundus*, A. AG.  
*Mellita longifissa*, MICH.

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<sup>1</sup> Edward Forbes, Report on Ægean Invertebrata, op. cit. p. 173.