CHAPTER 5. GEOLOGICAL EVOLUTION SECTION OF JAVA

INTRODUCTION

Geologically, Java is the best known island of the Archipelago and, therefore, it has to be treated in detail. The first general description of its geology was given by F. JUNGHUHN (1854), followed by the more complete treatise (in two volumes and a port-folio with maps and sections) by VERBEEK & FENNEMA (1896). For more than half a century this work was the most important source of information on the geology of Java.

In later years much field work has been done on Java by the Geological Survey of the Netherlands Indies, particularly in the years 1928-1941, but so far the explanatory texts of only 12 sheets of the New Geological Map of Java 1 : 100,000 have been published. Eleven out of the about 150 planned sheets, were issued: viz. sheets Nos. 14 (Bajah), 30 (Poerwakarta), 36 (Bandoeng), 54 (Madjenang), 58 (Boemiajoe), 66 (Karangkobar), 67 (Bandjarnegara), 109 (Lamongon), 110 (Modjokerto), 115 (Soerabaja), 116 (Sidoardjo)¹).

Nevertheless, in most areas of the unpublished sheets new fieldwork has been done, and a general insight in the stratigraphical relations and the tectonic structure of the island has already been obtained.

FIG. 255 on PLATE **31**. Geological sketchmap and orographic map of Java. (From "Atlas van Tropisch Nederland, 1938. sheet 15 a & 15 b).

FIG. 256 on PLATE 25. Map of Java, showing the position of maps and sections belonging to the subchapter on Java.

| Number | Number of the |
|--------|---------------|--------|---------------|--------|---------------|--------|---------------|
| on the | figure |
| map | | map | - | map | - | map | |
| 1 | 333 on pl. 35 | 9 | 332 | 22 | 297 | 33 | 280 on pl. 28 |
| | | | | | | | |
| 2 | 334 | 10 | 318 | 22 | 298 | 34 | 293 on pl. 35 |
| 3 | 323 | 10 | 319 | 23 | 307 | 35 | 287 |
| 3 | 324 | 11 | 320 | 23 | 308 | 36 | 288 on pl. 28 |
| 3 | 325 | 12 | 321 | 23 | 309 | 37 | 259 |
| 3a | 322 on pl. 36 | 13 | 339 | 23a | 303 | 38 | 290 |
| 4 | 313 on pl. 36 | 14 | 340 | 24 | 268 on pl. 34 | 39 | 283 |
| 4 | 314 | 15 | 341 | 25 | 272 | 40 | 290 |
| 4 | 315 | 16 | 342 | 26 | 292 | 41 | 260 |
| 4 | 316 | 17 | 265 | 27 | 274 | 42 | 261 |
| 5 | 335 | 18 | 312 on pl. 35 | 28 | 275 | 43 | 262 |
| 6 | 343 on pl. 37 | 19 | 301 on pl. 32 | 29 | 269 on pl. 28 | 44 | 263 |
| 7 | 327 | 20 | 305 | 30 | 310 on pl. 33 | 45 | 258 |
| 8 | 329 | 21 | 300 on pl. 25 | 31 | 266 on pl. 33 | 46 | 257 |
| 8 | 330 on pl. 32 | 22 | 295 | 32 | 269 on pl. 28 | | |
| 8 | 331 | 22 | 296 | 32 | 269 on pl. 28 | | |
| | | | | | | | |

Vide Table 26 Stratigraphical correlation table of Java (Chapter II).

As the preliminary stratigraphical terms, introduced by VERBEEK & FENNEMA, are not used in this book, little reference to their work will be made in the following pages, though it remains a valuable source of primary data.

¹ The double sheet 73/74 (Semarang-Oengaran) was ready in proof print, when the island was invaded by the Japanese in 1942, and the printing stones got lost. Only the explanatory text of this double-sheet was saved.