

female caste has been abolished and its reproductive function transferred to gynaecoid workers, i.e., to forms differing from ordinary workers only in their ability to produce worker as well as male offspring. It is very probable that even this abolition of whole casts has been accomplished by very slow and gradual processes and not by sudden variations, or mutations.

- <sup>1</sup> Wheeler, The Ants of the Baltic Amber, *Königsberg Schr. physik. Ges.*, 55, 1914, (1-142).
- <sup>2</sup> *Zool. Jahrb. Abth. Syst.*, Jena, 8, 1895, (774).
- <sup>3</sup> *Die Fossilen Insekten*, Leipzig, 1908, (p. 1283).
- <sup>4</sup> *Loc. cit.*, (p. 1285).
- <sup>5</sup> *Bull. Geol. Soc. Amer.*, 20, 1910, (427-606), and Climates of Geologic Time, *Carnegie Inst. Washington Pub.* No. 192, (pp. 263-298).
- <sup>6</sup> Dewitz, *Zs. wiss. Zool.*, Leipzig, 30, 1878, (78-105), Pl. 5.
- <sup>7</sup> British Ants, 1915, (p. 131 and 221), Fig. 50.
- <sup>8</sup> *Bull. Amer. Mus. Nat. Hist.*, New York, 21, 1905, (405-408), 1 pl.; Ants, etc., 1910, (p. 99), Fig. 63.
- <sup>9</sup> *Rev. Suisse Zool.*, 10, 1902, (444).
- <sup>10</sup> *Ibid.*, 18, 1910, (27).
- <sup>11</sup> *Ark. Zool.*, 9, 1915, (71).
- <sup>12</sup> *Biol. Bull.*, 4, Woods Hole, Mass., 1903, (180).
- <sup>13</sup> *Acta Soc. Ent. Bohemiae*, 5, 1908, (139-146), 4 figs.
- <sup>14</sup> British Ants 1915, (p. 220), Fig. 47.
- <sup>15</sup> *J. Exper. Zool.*, 8, 1910, (421), Fig. 7.
- <sup>16</sup> *Zs. wiss. Zool.*, 114, 1915, contains a full bibliography of the author's papers on the Lomechusini.
- <sup>17</sup> Wheeler, Boston, *Proc. Amer. Acad. Arts Sci.*, 51, 1915, (257).
- <sup>18</sup> Arnold, *Ann. S. Afric. Mus.*, 14, 1916 (195).