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GEOMORPHOLOGY OF THE PING AND THE WANG RIVER BASIN, AMPHOE SAM NGAO AND BAN TAK AREA CHANGWAT TAK

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พิมพ์ต้นฉบับบทคัดย่อวิทยานิพนธ์ภายในกรอบสีเขียวนี้เพียงแผ่นเดียว

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การศึกษาธรณีสัณฐานวิทยาของลุ่มแม่น้ำปิงและวัง บริเวณพื้นที่อำเภอสามเงา และอำเภอบ้านตาก จังหวัดตาก มีวัตถุประสงค์ที่จะจำแนกขอบเขตของแต่ละธรณีสัณฐาน รวมถึงการศึกษาชนิดและลักษณะของตะกอน และเพื่อหาความสัมพันธ์ระหว่างตะกอนกับสภาพแวดล้อมการสะสมตัวในอดีต

พื้นที่ศึกษาอยู่ในบริเวณตอนเหนือของที่ราบลุ่มภาคกลางซึ่งถูกขนาบด้วยเทือกเขาทางด้านตะวันออกและตะวันตกทางตอนเหนือของจังหวัดตาก ธรณีสัณฐานที่เกิดจากการทำงานของแม่น้ำสามารถจัดจำแนกได้เป็น 8 กลุ่ม ประกอบด้วย (1) บริเวณการสะสมตะกอนยุคเทอร์เชียรี (2) ลานตะพักลำน้ำขั้นสูง (3) ลานตะพักลำน้ำขั้นกลาง (4) ลานตะพักลำน้ำขั้นต่ำ (5) ที่ราบน้ำท่วมถึง (6) คันดินธรรมชาติ (7) ตะกอนหัวหาดของแม่น้ำ (8) สันดอนทราย

ตะกอนแม่น้ำที่สะสมตัวตั้งแต่ในยุคซีโนโซอิกตอนปลายแสดงคุณลักษณะที่คล้ายคลึงกันในส่วนของความกลมมนของก้อนกรวด การกระจายตัวของขนาดตะกอน แต่มีความแตกต่างกันเล็กน้อยในส่วนของชนิดของกรวดในบริเวณการสะสมตัวของตะกอนยุคเทอร์เชียรีและบริเวณลานตะพักลำน้ำส่วนความแตกต่างที่สามารถพบได้อย่างชัดเจนคือ ระดับของการถูกกัดกร่อน ระดับของการกลายสภาพเป็นหิน ระดับความสูงจากระดับน้ำทะเล ความต่างระดับ และลักษณะของศิลาแลง ลักษณะของตะกอนเหล่านี้สามารถสรุปได้ว่าเกิดจากสภาวะแวดล้อมแบบแม่น้ำประสานสายที่เป็นตัวการหลักก่อให้เกิดการสะสมตัวของชั้นตะกอนที่มีความหนามาก ๆ

การสึกกร่อนอย่างรวดเร็วและการเกิดธรณีแปรสัณฐานย่อย ๆรวมกับการเปลี่ยนแปลงของอากาศในสมัยไพลสโตซีนมีอิทธิพลต่อวิวัฒนาการของธรณีสัณฐานในพื้นที่ศึกษา การเกิดธรณีแปรสัณฐานในยุคใหม่อาจจะเป็นสาเหตุที่ทำให้เกิดการสะสมตัวของตะกอนที่มีความหนากว่าร้อยเมตร นอกจากนี้การเปลี่ยนแปลงของอากาศในสมัยไพลสโตซีนเป็นอีกสาเหตุที่ทำให้เกิดการเปลี่ยนแปลงของระดับอยู่ตัว ลานตะพักลำน้ำที่มีหลายระดับซึ่งปรากฏให้เห็นในปัจจุบันสันนิษฐาน ว่าเป็นผลมาจากการเกิดธรณีแปรสันฐานและการเปลี่ยนแปลงของอากาศในช่วงเทอร์เชียรีตอนปลาย และช่วงไพลสโตซีน

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The study of the geomorphology in the Ping and the Wang Rivers Basin, Amphoe Sam Ngao and Ban Tak area, northwestern Thailand was carried out. The aim is to delineate geomorphological units, to describe kinds and characters of sediments and to investigate the relationship between sediments and their depositional environment.

Geomorphologically, the area is situated in the north of the Central Plain, and is sandwiched by western and eastern mountain ranges to the north of Changwat Tak. Landforms in the units of fluvial origins can be divided into 8 geomorphological units including (1) Tertiary landform unit, (2) high terrace, (3) middle terrace, (4) low terrace, (5) floodplain, (6) natural levee, (7) point bar and (8) sand bar.

Late Cenozoic fluvialtile sediments have been deposited in the basin. The characteristics of the deposits e.g., the roundness of pebbles and the distribution of sediments but they differ slightly in pebble's association between the Tertiary and the terrace deposits are generally similar. However, different geomorphological units are clearly different in the degree of erosion, degree of diagenesis, altitude, and lateritic features of the deposits. The features of these sediments enable to conclude that braided riverine environment has played dominant role in the area.

Rapid denudation and small tectonic adjustment in association with climatic changes influenced the evolution of landforms in the study area. Young tectonism might cause the deposition up to a hundred meter thick. Climatic changes during Pleistocene led to the variation of base level. The present elevation of terraces found at different levels assumed to have resulted from tectonism and climatic change during Late Tertiary and Pleistocene.

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