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熱帯・亜熱帯地域のカルスト地形と地生態システム―東・東南アジアの円錐カルストの比較―
Geoecological Systems on Cone Karst in Tropical and Subtropical Regions, Eastern and Southeastern Asia

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Physical geography is an important discipline to evaluate natural and cultural landscapes. In eastern and southeastern Asia various karst landforms lie on terrains, where temperate, subtropical and tropical zones are distributed in terms of climatic geomorphology. Previous studies mainly discussed climatic controls on karst landforms based on measurements on climatic environments such as air temperature, soil moisture and carbon dioxide concentration. However, geomorphic processes on karst landforms depend on not only climatic conditions but also limestone formation. This study compares several fields located in low and mid latitudes regions in eastern and southeastern Asia, where karst landscapes are extensively distributed on various age limestone. Especially, this poster presentation focuses cone karst formed under different climate regions. Cone karst is generally considered as a tropical and subtropical landform related with rapid chemical weathering controlled by high temperature and heavy rainfall. Field observation, however, revealed that various geomorphic processes occur in cone karst and surrounding areas. For instance, cone karst in Ryukyu Islands (Southwestern Japan) is characterized by layered limestone, where physical weathering easily occurs by disintegration. In contrast, cone karst in low latitude regions (e.g. Visayas in central Philippines) frequently shows deep chemical weathering by rapid decomposition and leaching, which is affected by both tropical climate and non-layered limestone. These environments on geosphere influence geoecosystems and human activities such as soil, vegetation and land use. This observation indicates that limestone formation also controls karst landscapes, and that geomorphology and geoecology play important roles in landscape appreciation.
Keywords: landscape, karst, limestone, weathering, climatic geomorphology, geoecology