

Дискусии

ON THE FUNDAMENTAL LAW OF THE GEOMORPHOLOGY

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The author attempts to reconcile the main law of geomorphology formulated by D. A. Timofeev (1972), namely, „*the relief of the Earth is created and develops as a result of the discontinuous-continuous interaction of the interrelated and mutually reinforced endogenous and exogenous forces of relief formation*“, with his concept of global (morphospheric) geomorphology, proposing a new formulation of the law: *The morphosphere is created, moved and modified by the forces of radiation and endogenous processes and the forces of gravity and exogenous processes, whose closest interaction and interdependence maintain the crustal isostasy through constant changes of the vectors of denudation and accumulation in the continental and oceanic type of morphosphere, with maxima at the.... surface.*

Key words: morphosphere, endogenous forces and processes, exogenous forces and processes, denudation, accumulation, isostasy

ЗА ОСНОВНИЯ ЗАКОН НА ГЕОМОРФОЛОГИЯТА

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Авторът прави опит да съгласува главният закон на геоморфологията, формулиран от Д. А. Тимофеев (1972), а именно: „*релефът на Земята се създава и развива в резултат на прекъснато-непрекъснатото взаимодействие на взаимно свързаните и взаимно обусловени ендегенни и екзогенни сили на релефообразуване*“, със своята концепция за глобална (морфосферна) геоморфология, като предлага нова формулировка на зако-

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на: морфосферата се създава, движи и видоизменя от силите на радиацията и ендогенните процеси и силите на гравитацията и екзогенните процеси, чието най-тясно взаимодействие и взаимообусловеност поддържат изостазията на земната кора чрез постоянните промени на векторите на денудацията и акумулацията в континенталния и океанския тип морфосфера, с максимуми на повърхността ѝ.

Ключови думи: морфосфера, ендогенни сили и процеси, екзогенни сили и процеси, денудация, акумулация, изостазия

According to Chichagov (2016), to date, the only universal and major law in geomorphology is formulated by D. A. Timofeev (1972) and states: „*the relief of the Earth is created and develops as a result of continuous-discontinuous interaction of interconnected and interdependent endogenous and exogenous forces of relief formation*“. Later, Seliverstov (1985) saw in the numerous and complex connections and dependencies of the relief from endo- and exogenesis the strongest arguments for the unity of geomorphology (which the author sees in the existing morphosphere as a result of these connections and dependencies). Since no one has yet objected to the law in the pages of the Russian journal Geomorphology, we could consider it generally accepted in Russia. Obviously, Timofeev was able to express the most important and essential connection between the relief as an object of geomorphology and the factors that form it simultaneously - endogenous and exogenous forces and processes.

Because the author claims to develop the concept of a new global geomorphology as a necessary complement to Plate tectonics, he feels obliged to express from the standpoint of the concept his position, if not towards the special geomorphological laws (which are the subject of the specific geomorphological disciplines), at least towards this universal and most important geomorphological law. Since its objective existence and operation are not disputed by anyone, its revision from this new position would constitute a test not only of its new formulation, but to some extent of the value of the concept itself.

It is worth recalling that not only the relief of the Earth is a result of the interaction of endogenous and exogenous forces. For it has long been established and accepted (Geol. slovar, 1973, Shchukin, 1980, Dobrovolsky, 2001, etc.) that, in addition to the relief, the entire zone of hypergenesis beneath it is a zone of interaction of endogenous and exogenous processes, in contrast to the tectosphere beneath it, in which only endogenous forces and processes operate. The fact that since the establishment of the geomorphology as an independent science more than a century ago (Esakov, Mescheriakov, 1975) to the present time (Problemy...1988, etc.) the world geomorphological literature repeats (in different variants) that only the relief is the object of geomorphology, without paying attention to the zone of hypergenesis, is a question that deserves special study. And especially the damage to the theory that, according to the author, this one-sided view of the issue has inflicted on science itself. Damage that he intends to remedy, albeit belatedly, by clarifying the scope and content of some basic concepts in geomorphology and introducing new ones (Parlichev, 1989, 1992, 1994, 2017a), such as the concept of „morphosphere“, as an object, and „morphospheric basins“ as the subject of geomorphology (Parlichev, 2017b), and also the clarification of a number of theoretical issues in terms of his notions of global geomorphology (Parlichev, 2017b, 2018, 2021, 2021b). From this point of

view, the author also attempts to update the basic law of geomorphology proposed by Timofeev 50 years ago. In its new formulation, it states: *the morphosphere is created, moved and modified by the forces of radiation and endogenous processes and the forces of gravity and exogenous processes, whose closest interaction and interrelationship maintain the crustal isostasy through the constant changes of the vectors of denudation and accumulation in the continental and oceanic type morphosphere, with a maximum at its surface.*

Thus formulated, the basic law of geomorphology reflects the author's understanding of the role of the morphosphere as a natural system, a kind of mobile buffer that absorbs and dampens shocks from below and above, through which endogenesis and exogenesis regulate their relationships and, through the constantly maintained isostasy of the crust and the law of decreasing relative weight of geospheres in altitude (Kalesnik, 1977, p. 258), prevent severe global cataclysms.

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