UNIVERSIDADE DE SÃO PAULO

INSTITUTO DE BIOCIÊNCIAS

DEPARTAMENTO DE ECOLOGIA

**BIE 214 Ecologia II – 2016– Prova II (diurno)**

Nome: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**OBS: Ao escrever suas respostas, limite-se às linhas.**

1. Definições e competição:
   1. O que é uma comunidade ecológica?

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* 1. Predadores são responsáveis por aumentar a taxa de mortalidade de suas presas. Porém, a extinção local de predadores, em muitos casos, leva a redução da diversidade das potenciais presas desses predadores. Elabore uma hipótese que explique essa aparente contradição.

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1. Padrões de distribuição de traços fenotípicos em espécies em uma comunidade podem informar sobre processos moldando a diversidade. Em uma comunidade fictícia há uma grande diferença nos traços fenotípicos de espécies granívoras, isto é, predadoras de sementes. Sabendo que não há variação espacial ou temporal nas características abióticas e de vegetação da comunidade em questão, formule uma hipótese que explique o porquê das espécies granívoras apresentarem diferenças em seus traços fenotípicos.

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1. Certos camarões e peixes (limpadores) consomem parasitas de indivíduos de diferentes espécies de peixes (clientes) em recifes de coral, reduzindo o número de parasitas por clientes (Fig. A). As implicações do mutualismo entre clientes e limpadores para a diversidade de espécies de clientes foram exploradas por meio da remoção experimental dos limpadores (Fig. B). Com base no que você aprendeu nas aulas sobre parasitismo, mutualismo e sobre teias tróficas proponha uma hipótese que explique o padrão observado na Figura B.



Figura: (A) Número médio de parasitas por indivíduo de peixe cliente em recifes e (B) mudança percentual na diversidade de espécies de clientes em recifes. Recifes com o limpadoresrepresentados por colunas brancas e recifes nos quais os limpadores foram removidos experimentalmente representados por colunas pretas.

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1. No início do século XX o lobo-marsupial, *Thylacinus cynocephalus*, foi exterminado da ilha da Tasmânia. Este marsupial era o principal predador da ilha, consumindo diversas espécies de mamíferos. Elabore uma hipótese que prediga como a diversidade das presas de *T. cynocephalus* foi influenciada pela extinção desse predador. Explique uma suposição central de sua hipótese.

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1. O predador de topo *Andersonia minotaurus* invadiu duas comunidades ecológicas, **A** e **B**, que variam apenas em relação a composição de espécies. Na comunidade **A**, a invasão por *A. minotaurus* causou uma redução da abundância de produtores enquanto na comunidade **B** a invasão levou a um aumento na abundância de produtores. Sabendo que *A. minotaurus* é estritamente carnívoro e com base nos seus conhecimentos sobre cascatas tróficas formule uma hipótese para explicar o porquê dos efeitos da invasão por *A. minotaurus* sobre os produtores variarem entre as comunidades **A** e **B**.

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