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Universidad de Buenos Aires
Facultad de Ciencias Exactas y Naturales
Carrera de Ciencias Biológicas

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Carrera: Licenciatura en Ciencias Biológicas	Código de la carrera: 05
Carrera: Doctorado en Ciencias Biológicas	Código de la carrera: 55
	Código de la materia:

**Morfología funcional de la reproducción y el crecimiento en crustáceos
 decápodos: aspectos teóricos y aplicados**

CARÁCTER:	[SI / NO]	PUNTAJE:
Curso obligatorio de licenciatura (plan 19)	no	--
Curso optativo de licenciatura (plan 1984)	no	--
Curso de postgrado	si	--

Duración de la materia:	2 Semanas	Cuatrimestre en que dicta:	Primer cuatrimestre
Frecuencia en que se dicta:	<i>Anualmente</i>		

Horas de clases semanales:	Discriminado por:	Hs.
	Teóricas	36
	Problemas	0
	Laboratorios	15
	Seminarios	9
Carga horaria semanal:		30
Carga horaria total del curso:		<u>60</u>
Salidas de Campo (en días)		0

Asignaturas correlativas:	----
Curso PG. Dirigido a:	Lic. En Cs. Biológicas, Ing. Agrónomos y carreras afines.
Forma de Evaluación:	Examen escrito y presentación de un proyecto

Profesor/a a cargo:	Dra. Laura S. López G
Firma:	<i>[Handwritten Signature]</i>
Aclaración:	Fecha: 05 / 07 / 2007

Laura S. Lopez G.

Curso de Postgrado

Morfología funcional de la reproducción y el crecimiento en crustáceos decápodos: aspectos teóricos y aplicados

Dictado por: Dra. Laura S. López G.

Profesora Adjunta DBBE, FCEyN-UBA

PROGRAMA

Unidad 1: Patrones generales de reproducción en Crustáceos: gonocorismo, intersexualidad y hermafroditismo. Sus particularidades en Decapoda.

Unidad 2: Anatomía y función del sistema reproductor en hembras: estructura ovárica, crecimiento oocitario, escalas macroscópicas y microscópicas de desarrollo gonadal. Vitelogénesis. Características del proceso y principales componentes del vitelo. La calidad del vitelo y su vinculación con la dieta en especies de cultivo. Uso de índices de madurez ovárica. Sus ventajas y desventajas. Oviducto: estructura generalizada. Thelycum (abierto y cerrado) y Espermatecas. Relación con la fecundación y su aplicación en análisis filogenéticos. Implicancias con el sistema de cópulas. Retención espermática a través del proceso de ecdisis en brachyura. Senescencia espermática dentro de la espermateca. Canal vaginal y morfología de los gonoporos.

Unidad 3: Anatomía y función del sistema reproductor en machos: Estructura testicular: lóbulos testiculares y morfología espermática comparada en diferentes grupos. La "fecundidad" del macho. Conducto deferente: diferenciación, partes, estructura y función. El ciclo reproductivo del macho. Formación y tipos de espermátóforos. Vinculación con los patrones de fecundación externa e interna. Caracteres sexuales secundarios involucrados en la transferencia espermática. Tendencias evolutivas dentro de Decapoda. Criopreservación espermática y su utilización en cultivos.

Unidad 4: Intersexualidad y hermafroditismo: Tipos de hermafroditismo e intersexualidad en Decapoda. El caso *Lysmata*. Rol de la glándula androgénica en la diferenciación masculina y en la "plasticidad sexual". Posibilidades de aplicación de la plasticidad sexual en especies de interés comercial.

Unidad 5: Inversión energética en reproducción: Relaciones de biomasa invertida en reproducción y en crecimiento somático. Sinergismo *versus* antagonismo. Fecundidad, formas de cuantificación y relación con el tamaño de la hembra. Número de puestas, variaciones de la fecundidad individual y poblacional durante el período reproductivo. Tamaño de los huevos, relación con la fecundidad, el ambiente y la estrategia reproductiva. SOM, RSOM, RO y su sentido comparativo.

Unidad 6: Desarrollo temprano: Características generales del desarrollo embrionario. Ejemplos. Eclósión larval, estímulos actuantes y mecanismos involucrados en el proceso de eclósión. Desarrollo larval:



principales cambios morfo-funcionales. Factores moduladores del desarrollo embrionario. Puntos críticos: PNR y PRS y sus aplicaciones a cultivos. La alimentación en las fases tempranas del desarrollo. Criterios para evaluar la calidad de progenie y sus aplicaciones en cultivos.

Unidad 7: Crecimiento en juveniles y adultos. Crecimiento absoluto y relativo. Adquisición de la madurez sexual: cambios morfométricos, histológicos y fisiológicos. Estrategias de apareamiento: aspectos morfo-funcionales y comportamentales. Aplicaciones a la acuicultura y pesquerías de crustáceos de interés comercial.

Unidad 8: Acuicultura de Crustáceos. Acuicultura mundial y regional. Especies tradicionalmente cultivadas y tendencias actuales. Principales líneas de investigación. Acuicultura ornamental: perspectivas y relevancia económica. Acuicultura y conservación. *Cherax quadricarinatus* como modelo de cultivo: características de la especie, ciclo de vida y principales requerimientos. Aspectos comparados con los cultivos de camarones peneidos.

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DINÁMICA REPRODUCTIVA- FECUNDIDAD- CRECIMIENTO RELATIVO- MADUREZ SEXUAL

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- **CEBALLOS VAZQUEZ, B.P.; ROÑAS, C.; & I.S. RACOTTA. 2003.** Sperm quality in relation to age and weight of white shrimp *Litopenaeus vannamei*. *Aquaculture* 228: 141-151.
- **EDGERTON, B.F. 2005.** Freshwater crayfish production for poverty alleviation. *World. Aq.* 36: 48-64.

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