

## DAFTAR PUSTAKA

- Abele, L.G., Spears, T., Kim, W., Applegate, M., 1992. Phylogeny of selected maxillopodan and other crustacean taxa based on 18S ribosomal nucleotide sequences: a preliminary analysis. *Acta Zool.* 73, 373–382.
- Afrianto, Eddy dan Liviawaty, Evi. 1992. *Pemeliharaan Kepiting*. Kanisius. Yogyakarta
- Austin, B dan Austin, D.A. 1999. *Bacterial Fish Pathogens Disease of farmer and Wild fish*, 3<sup>rd</sup> (revised) ed Spriger-praxis, Goldaming.
- Andeson A, P. Mather, Ricardson. 2004. Nutrition of the mud crab *Scylla Serrata* (Forsk.) Dalam proceeding of Mud Crab Aquaculture in Australia and Southeast Asia. Allan dan D.Fielder (editor): 57-59
- Aslamyah S, Y.Fujaya. 2011. Stimulasi Molting dan Pertumbuhan kepiting Bakau (*Scylla*. sp) melalui Aplikasi Pakan Buatan Berbahan Dasar Limbah Pangan yang Diperkaya ekstrak Bayam. *Indonesia Jurnal of Marine Science*. 15(3): 170-178
- Aurivillius, C. W. S. 1892. *Neue Cirripeden ausdem Atlantischen, Indischen und Stillen Ocean*. Kungliga Vetenskaps-Akademiens Forhandlingar. Stockholm, 3: 123-134.
- Aurivillius, C. W. S. 1894. *Studien über Cirripieden*. Kungliga Svenska Vetenskaps- Akademiens Handlinger, Stockholm, 26: 1-107. Daniel, A., 1955. *The Cirripedia of the Madras Coast*. Bulletin Madras Government Museum, New Series –Natural History Section, 6: 1-40.
- Balaresque P, Bowden GR, Adams SM, Leung H-Y, King TE,2010. A Predominantly Neolithic Origin for European Paternal Lineages." *journal.P.bio*.285p
- Chan, Benny KK.,Ling Ming Tsang., Fu-lung Shih. 2009. Morphological and Genetic Defferentiation of The Stalked Barnacle *Heteralepas japonica* Aurivillius, 1892, With Description of a New Species of *Heteralepas* Pilsbry,1907, From the Philipinnes. *The Rafless Bulletin Of Zoology*. 20, 85-93
- Chan, KK; Prabowo, Romanus; Lee, Kwen-Shen. 2012. *Octolasmis cor* (Aurivillius, 1892). <http://barnacle.biota.biodiv.tw/pages/1059> [diakses tanggal 14 agustus 2013]

- Chan, KK; Prabowo, Romanus; Lee, Kwen-Shen. 2012. *Octolasmis angulata* (Aurivillius, 1894) <http://barnacle.biota.biodiv.tw/pages/1059> [diakses tanggal 14 agustus 2013]
- Daniel, A., 1955. The Cirripedia of the Madras Coast. Bulletin Madras Government Museum, New Series –Natural History Section, 6: 1-40
- Darwin, C., 1851. A monograph on the sub-class Cirripedia I. The Lepadidae: 1-400, 10 pls, Ray Society, London.
- Effendi, H., 2003. Telaah Kualitas Air *Bagi Pengelolaan Sumberdaya dan Lingkungan Perairan*. Kanisius. Yogyakarta.
- Farrapeira, CMR., Mendes, ES.b, Dourado, J.b dan Guimarães,J.b, 2010, Coliform accumulation in Amphibalanus amphitrite (Darwin, 1854) (Cirripedia) and its use as an organic pollution bioindicator in the estuarine area of Recife, Pernambuco, Brazil. <http://www.scielo.br/pdf/bjb/v70n2/11.pdf> [diakses tanggal 20 oktober 2013]
- Febriana A. 2011. Filogeni Berdasarkan Sekuens DNA Mitokondria Gen Cytochrome Oxidase I (Gen COI) pada Beberapa Bangsa Sapi Lokal Indonesia [skripsi]. Bogor: Fakultas Matematika dan Ilmu Pengetahuan Alam, Institut Pertanian Bogor.
- Fujaya, Y. Aslamyah, St. Fujaya,L. Alam, Nur. 2012. Budidaya dan Bisnis Kepiting Lunak. Brillian International. Surabaya. 2-16.
- Gannon, A.T. 1990. Distribution Of *Octolasmis Mulleri*, An Ectocommensal Gill Barnacle, On The Blue Crab. Bulletin Of Marine Science, 46(1): 55-61
- Gannon, A. T. and Wheatly, M. G. 1992. Physiological effects of an ectocommensal gill barnacle, *Octolasmis muelleri*, on gas exchange in the blue crab *Callinectes sapidus*. Journal of Crustacean Biology, 12: 11-18.
- Glenner. H, Martin Bay Hebsgaard. 2006. Phylogeny and evolution of life history strategies of the Parasitic Barnacles (Crustacea, Cirripedia, Rhizocephala). Molecular Phylogenetics and Evolution 41 (2006) 528–538

- Gray, J. D. 1825. A synopsis of the Genera of cirripedes arranged in natural families, with a description of some new species. *Annals of Philosophy*, 10: 97-107.
- Hashmi SS and Zaidi SS. 1964. Incidence of Lepas Infestation on the gills of *Scylla serrata* in Karachi Water. *Agriculture Pakistan* (16) 1, 117-127.
- Hilma, Seri. 1993. Pengaruh Suhu Terhadap Perkembangan Populasi *Gyrodactylus fernandoi* Pada Benih Ikan Lele Dumbo. Skripsi Fakultas Perikanan. Institut Pertanian Bogor
- Health, A.G. 1987. *Water Pollutan and Fish physiologi* crc press. Florida.
- Heasman, M. P. 1988. Aspects of the general biology and fishery of the mud crab *Scylla serrata* (Forssm) in Moreton Bay, Queensland. Ph.D. Thesis No. 22 10, University of Queensland. 506 pp.
- Irianto, Agus. 2005. *Patologi Ikan Teleostei*. Gadjah Mada University Press. Yogyakarta. 102
- Irvansyah. M.Y, Nurlita Abdulgani, dan Gunanti Mahasri. 2012. Identifikasi dan Intensitas Ektoparasit pada Kepiting Bakau (*Scylla serrata*) Stadia Kepiting Muda di Pertambakan Kepiting, Kecamatan Sedati, Kabupaten Sidoarjo. *Jurnal Sains dan Seni ITS* Vol. 1, No. 1
- Jeffries, W. B., Voris, H. K., and Yang, C. M. 1982. Diversity and distribution of the pedunculate barnacle *Octolasmis* in the seas adjacent to Singapore. *Journal of Crustacean Biology*, 2: 562-569.
- Jeffries, William, B. Harold K. Voris, Sombat Poovachiranon, dan L.C Heil. 1995. The Live Cycle Lepadhormorph Barnacle, *Octolasmis cor* and Methods for Their Laboratory Culture. *Phuket Marine Biol. Cent. Bull.* 29-35
- Jeffries, William, B. Harold K. Voris dan Chang Man yang. 1989. A New Mechanism Of Host Colonization: Pedunculate Barnacles Of The Genus *Octolasmis* On the Mangrove Crab *Scylla serrata*. *Ophelia* 31 (1): 51-58
- Jeffries, William, B. Harold K. Voris dan Chang Man yang. 1985. Growth Of *Octolasmis cor* (Aurivillius, 1892) On The Gills Of *Scylla Serrata* (FORSKAL, 1755). *BioL Bull* 169: 291-296

- Jeffries, William, B. Harold K. Voris Phaibul Naiyanetr dan Somsak Panha. 2005. Pedunculate Barnacles of the Symbiotic Genus *Octolasmis* (Cirripedia: Thoracica: Poecilasmatidae) from the Northern Gulf of Thailand The Natural History Journal of Chulalongkorn University 5(1): 9-13,
- Jithendran. K.P, M. Poornima, C. P. Balasubramania dan S. Kulasekarapandian. 2010. Diseases of mud crabs (*Scylla* spp.): an overview. Indian J. Fish., 57(3) : 55-63
- Kanna, Iskandar. 2002. Budidaya Kepiting Bakau. Kanisius. Yogyakarta
- Kasry, AS. 1984. Telaah Kegiatan Bertelur Kepiting Bakau *Scylla serrata* dan Faktor-faktor yang Mempengaruhinya di Perairan Teluk Jakarta. Fakultas Perikanan IPB Bogor. 32 p
- Kumaravel .k, S. Ravichandran and G. Rameshkumar. 2009. Distribution of Barnacle *Octolasmis* on the Gill Region of Some Edible Crabs. Academic Journal of Entomology 2 (1): 36-39,
- Lanchester, F. 1902. On the Crustacea collected during the "Skeat Expedition" to the Malay Peninsula. Proceedings Zoological Society of London, 2: 363-381.
- Lang,W. H. 1976. The larval development and metamorphosis of the pedunculate barnacle *Octolasmis mulleri* (Coker, 1902) reared in the laboratory. BioLBull 150:255-267
- Lerrsutichawal, Theerawoot and Norasingh Penprapai. 2013. Seasonal Distribution and Host-Parasite Interaction of Pedunculate Barnacle, *Octolasmis* spp. on Orange Mud Crab, *Scylla olivacea*. Walailak Journal <http://wjst.wu.ac.th> [diakses tanggal 15 september 2013]
- MacDonald, J. D., 1869. On an apparently new Genus of Minute Parasitic Cirripeds, between *Lepas* and *Dichelaspis*. Proceedings Zoological Society of London, pp. 440-444.
- Newton CR, Graham A. 1997. *PCR Introduction to Biotechnology*. Second Edition. Oxford: Bios Scientific Publisher Ltd.
- Newman, W. A. (1970). Five pedunculate cirripeds from the western Pacific, including two new forms. Crustaceana. 1(2), 100-116.

- Pariwono, J.I., 1996. Oseanografi Fisika dan Dinamika Perairan Pesisir. Materi Pelatihan Perencanaan dan Pengelolaan Wilayah Pesisir Secara Terpadu (ICZPM). PKSPL-LP IPB kerjasama dengan Dirjen BANGDA-DEPDAGRI. Bogor.
- Praptiasih, Indah. 2010. Mengenal Octolasmis, parasit leher angsa pada Crustacea. Info Karikan, edisi ketujuh. Pusat Karantian Ikan. 28-33p
- Pérez-Losada Marco, Jens T. Høeg, and Keith A. Crandall. 2004. Unraveling the Evolutionary Radiation of the Thoracican Barnacles Using Molecular and Morphological Evidence: A Comparison of Several Divergence Time Estimation Approaches. Society of Systematic Biologists. 53(2):244–264
- Rios, A.F. F. Fraga, F.F. Perez and F.G. Figueras .1998. Chemical composition of phytoplankton and Particulate Organic Matter in the Ría de Vigo (NW Spain). Scitiena Marina Journal 62 (3): 257-271
- Yunowo,T. 2005. Biologi Molekuler. Erlangga. Jakarta
- Youlu, Wu dan Liu Shizhong. 2002. Studies on the causes of death of *Portunus trituberculatus* (Miers). Dongahi Marine Science [http://en.cnki.com.cn/Article\\_en/CJFDTOTAL-DHHY502.006.htm](http://en.cnki.com.cn/Article_en/CJFDTOTAL-DHHY502.006.htm) [diakses tanggal 1 september 2013]
- Yusa, Y, Mayuko Takemura, Katsumi Miyazaki, Tetsuya Watanabe, And Shigeyuki Yamato. 2010. Dwarf Males of *Octolasmis warwickii* (Cirripedia: Thoracica): The First Example of Coexistence of Males and Hermaphrodites in the Suborder Lepadomorpha. Bulletin Of Marine Science. 259–265
- Sasimartoyo, Tri Prasetyo. 2002. Kajian Penerapan Sistem Eko-sanitasi dalam Pemanfaatan Kembali Limbah Manusia yang Terlupakan. Media Litbang Kesehatan. Volume XXI nomor 1.
- Schmidt.G. D. 2008. Essentials of Parasitology. Fifteenth Edition. Universal Book Stall : New Delhi
- Sulaeman, Suparto, Eviati. 2005. Petunjuk Teknis. Analisis Kimia Tanah, Tanaman, air dan Pupuk. Balai Penelitian Tanah. Badan Penelitian dan Pengembangan pertanian, Departemen Pertanian
- Sunandar,dadan dan Imron. 2010. Optimalisasi Templat DNA Udang Galah *Macrobracium rosebergii* dalam proses PCR-RAPD. Prosiding Forum

Inovasi Teknologi Akuakultur. Loka Riset Pemuliaan dan Teknologi Budidaya Air Tawar.

- Takashima, F dan Hibiya, T. 1995. Fish Histology Normal and Pathological features of Second Edition. Kadausha. Tokyo.
- Voris H.K and Jeffries. W.J. 2001. Distribution and Size of a Stalked Barnacle (*Octolasmis Muelleri*) on The Blue Crab, *Callinectes sapidus*. Bulletin Of Marine Science, 68(2): 181–190
- Voris, H. K. and Jeffries, W. B. 1997. Size distribution, and significance of capitular plates in *Octolasmis* (Cirripedia: Poecilasmatidae). Journal of Crustacean Biology, 17: 217 – 226.
- Voris, H. K., Jeffries, W. B. and Poovachiranon, S. 2000. Size and location relationships of stalked barnacles of the genus *Octolasmis* on the mangrove crab, *Scylla serrata*. Journal of Crustacean Biology, 20: 485-496.
- Voris .Harold K., Jeffries, William, B dan Sombat Poovachiranon . 1994. Patterns of Distribution of Two Barnacle Species on the Mangrove Crab, *Scylla serrata* Biol. Bull. 187: 346-354
- Walker, Graham. 1974. The Occurrence , Distribution and Attachment Of the Pedunculate Barnacle *Octolasmis Mulleri* (Coker) On The Gills Of Crab, Particulary the blue crab. *Callinectes Sapidus* . Biol. Bull., 147 : 678-689.
- Walker, Graham. 2001. Some Observations on the Epizoic Barnacle *Octolasmis angulata* within the Branchial Chambers of an Australian Swimming Crab *Journal of Crustacean Biology* Vol. 21, No. 2 (May, 2001), pp. 450-455
- Whiting, M. F., J. C. Carpenter, Q. D. Wheeler, and W. C. Wheeler. 1997. The Strepsiptera problem: Phylogeny of the holometabolous insect orders inferred from 18S and 28S ribosomal DNA sequences and morphology. Syst. Biol. 46:1–68.

## **LAMPIRAN**

Lampiran 1 Pensejajaran berganda nukleotida pada gen mtDNA COI  
*Octolasmis cor*, *Octolasmis angulata*, *Octolasmis* spp dan  
*Octolasmis lowei*

Octolasmis cor .txt	1	-----T	CATAAAGATATTGG	ACTT	TATATTT	BATATTTGGAGCTTGATCA	GCT	49						
Octolasmis lowei.txt	1	-----T	CATAAAGATATTGG	AACTC	TATATTT	AATATTTGGAGCTTGATC	TGCT	48						
Octolasmis sp.txt	1	TGGTCAACAAAT	CATAAAGATATTGG	ACTT	TATATTT	BATATTTGGAGCTTGATCA	GCT	60						
Octolasmis cor .txt	50	ATGGT	GGGACTGCTC	TAGT	TACT	GAATTCGGGCAGAGCT	SGTCAACCT	SGAAGATT	49					
Octolasmis lowei.txt	49	ATAAAT	GGGACTGCTT	TAGTATAT	TAAATTCGGGCAGAGCT	SGTCAACCA	SGAAGATT	108						
Octolasmis sp.txt	61	ATGGT	GGGACTGCTC	TAGT	TACT	GAATTCGGGCAGAGCT	SGTCAACCT	SGAAGATT	120					
Octolasmis cor .txt	110	ATTGGA	GATGAT	CAAAATC	TATTAATGT	TATCGTTACA	SCTCA	SCTTTTATTATAAATTTT	169					
Octolasmis lowei.txt	109	ATTGGS	SACGAT	CASAT	TACAATGT	TATCGTTACT	SCTCAT	SCTTTTATTATAAATTTT	168					
Octolasmis sp.txt	121	ATTGGA	GATGAT	CAAAAT	TATTAATGT	TATCGTTACA	SCTCA	SCTTTTATTATAAATTTT	180					
Octolasmis cor .txt	170	TTTATA	STAAATACC	TATCAT	SATTTGGGGG	TTTGGAAATTGAT	TATACCTTTAATACTA	229						
Octolasmis lowei.txt	169	TTTAT	STTATACCA	ATTTA	AATTTGGGGT	TTTGGTAAATG	SCTTTACCTTTAATACTA	228						
Octolasmis sp.txt	181	TTTATA	STAAATACC	TATCAT	SATTTGGGGG	TTTGGAAATTGAT	TATACCTTTAATACTA	240						
Octolasmis cor .txt	230	SGS	SCCTGATATA	SCTTT	CCCG	TTAAATAAATAAAGATTTTGGCT	TTSCCTCCA	289						
Octolasmis lowei.txt	229	SGT	GCCTGATATA	SCTTT	CCCG	TTAAATAAATAAAGATTTTGGCT	TTSCCTCCA	288						
Octolasmis sp.txt	241	SGS	SCCTGATATA	SCTTT	CCCG	TTAAATAAATAAAGATTTTGGCT	TTSCCTCCA	300						
Octolasmis cor .txt	290	SCTCT	TATAT	TATTAA	TAGAGG	ATCTTAGTTGAAGC	SGGGC	GGGACTGG	TGAA	349				
Octolasmis lowei.txt	289	SCTCT	TATAC	TATTAA	TAGAGG	ATCTTAGTTGAAGC	SGGGC	GGGACTGG	TGAA	348				
Octolasmis sp.txt	301	SCTCT	TATAC	TATTAA	TAGAGG	ATCTTAGTTGAAGC	SGGGC	GGGACTGG	TGSA	360				
Octolasmis cor .txt	350	STATAT	CCTCCTTATC	AGAAAT	TGCTCATT	CA	SGAGCT	TCTBT	SATCTA	AGTATT	409			
Octolasmis lowei.txt	349	STTTAT	CCTCCTTATC	TAGSAA	TATGCTCATT	CG	SGAGCT	CTCS	BT	SACTTA	CAATT	408		
Octolasmis sp.txt	361	STATAT	CCTCCTTATC	AGAAAT	TATGCTCATT	CA	SGAGCT	TCTBT	SATCTA	AGTATT	420			
Octolasmis cor .txt	410	TTTTCC	TTCAATTTAGCGGG	SC	CTTCAAT	TT	SGTGCTAT	CAATTTTATAACTAC	469					
Octolasmis lowei.txt	409	TTTTCT	TTCAATTTAGCGGG	SC	CTTCAAT	TT	SGTGCTAT	CAATTTTATAACTAC	468					
Octolasmis sp.txt	421	TTTTCC	TTCAATTTAGCGGG	SC	CTTCAAT	TT	SGTGCTAT	CAATTTTATAACTAC	480					
Octolasmis cor .txt	470	STTAT	CAATATAC	GC	TCAGT	ACAAT	AAGS	TTTGATAAAATTACC	TTATT	ST	TG	SAGG	529	
Octolasmis lowei.txt	469	STTAT	CAATATAC	GC	TCAGT	ACAAT	SAGS	TTTGATAAAATTACC	TTATT	ST	TG	SAGG	528	
Octolasmis sp.txt	481	STTAT	CAATATAC	GC	TCAGT	ACAAT	AAGS	TTTGATAAAATTACC	TTATT	ST	TG	SAGG	540	
Octolasmis cor .txt	530	STATTT	TATTACT	STAAT	TCTT	TACTACTA	TCC	TACC	STAT	TAGCAGG	SCT	TACT	ACT	589
Octolasmis lowei.txt	529	STTTTT	TATTACA	GTAAT	CTT	TATTACT	TTC	TACC	STAC	TAGCAGG	SC	TACT	ACT	588
Octolasmis sp.txt	541	STATTT	TATTACT	STAAT	TCTT	TACTACTA	TCC	TACC	STAT	TAGCAGG	SCT	TACT	ACT	600
Octolasmis cor .txt	590	ATSTTA	CTAACT	GATCGT	TAA	CTFAAATACTTC	-----	621						
Octolasmis lowei.txt	589	ATATTA	TAAACA	GATCGS	TAA	CTFAAATACTTC	ATTTTT	CGATCCGACAGGCGGTGGGGAT	648					
Octolasmis sp.txt	601	ATSTTA	CTAACT	GATCGT	TAA	CTFAAATACTTC	TTTCT	TTGACCCAACAGGTGGGGGTGAT	660					
Octolasmis cor .txt	621	-----	-----	-----	-----	-----	-----	621						
Octolasmis lowei.txt	649	CCTATT	CTTTATCAGC	ATTTATTT	TGATTTT	TGG	-----	683						
Octolasmis sp.txt	661	CCTATT	CTTTACCA	CACTTGT	CTGATTTT	TGGT	CACCC	TGAAG	706					



Lampiran 2 Pensejajaran berganda nukleotida pada gen 18 rDNA  
*Octolasmis cor*, *Octolasmis angulata*, *Octolasmis* spp dan  
*Octolasmis lowei*

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Ocolasmis lowei.txt          1  GTSATACATGGATAAAGTGGTAATTCTAGAGCTAATACATGCAACCGAGCCCTAGTCCA 60
Octolasmis angulata.txt     1  GTSATACATGGATAAAGTGGTAATTCTAGAGCTAATACATGCAACCGAGCCCTAGTCCA 60
Octolasmis cor.txt         1  --GATACATGGATAAAGTGGTAATTCTAGAGCTAATACATGCAACCGAGCCCTAGTCCA 58
Octolasmis sp.txt          1  GTSATACATGGATAAAGTGGTAATTCTAGAGCTAATACATGCAACCGAGCCCTAGTCCA 60

Ocolasmis lowei.txt        61  SCGCTTCGGTGTGGCGGGGCGCTTTTATTGGCTGAAAACCGATGGCTGCCCTCGTGGCG 120
Octolasmis angulata.txt    61  SCGCTTCGGTGTGGCGGGGCGCTTTTATTGGCTGAAAACCGATGGCTGCCCTCGTGGCG 120
Octolasmis cor.txt        59  SCGCTTCGGTGTGGCGGGGCGCTTTTATTGGCTGAAAACCGATGGCTGCCCTCGTGGCG 118
Octolasmis sp.txt         61  SCGCTTCGGTGTGGCGGGGCGCTTTTATTGGCTGAAAACCGATGGCTGCCCTCGTGGCG 120

Ocolasmis lowei.txt        121 STCGTTATTCGATGAATCACAATAACATTGTGTGGATCGCACGGTCTCTGTACCGGCGACG 180
Octolasmis angulata.txt   121 STCGTTATTCGATGAATCACAATAACATTGTGTGGATCGCACGGTCTCTGTACCGGCGACG 180
Octolasmis cor.txt       119 STCGTTATTCGATGAATCACAATAACATTGTGTGGATCGCACGGTCTCTGTACCGGCGACG 178
Octolasmis sp.txt        121 STCGTTATTCGATGAATCACAATAACATTGTGTGGATCGCACGGTCTCTGTACCGGCGACG 180

Ocolasmis lowei.txt        181 SCGCTTTCAAATATCTGCCATTATCAGCTCTCGACGGTTTGTAGTGGCTGACCGTGGCTC 240
Octolasmis angulata.txt   181 SCGCTTTCAAATATCTGCCATTATCAGCTCTCGACGGTTTGTAGTGGCTGACCGTGGCTC 240
Octolasmis cor.txt       179 SCGCTTTCAAATATCTGCCATTATCAGCTCTCGACGGTTTGTAGTGGCTGACCGTGGCTC 238
Octolasmis sp.txt        181 SCGCTTTCAAATATCTGCCATTATCAGCTCTCGACGGTTTGTAGTGGCTGACCGTGGCTC 240

Ocolasmis lowei.txt        241 TCGACGGGTAAACGGGGAATATGGGTTCTATTCCGGAGAGGGAGCCGTGAGAGATGGCTACCA 300
Octolasmis angulata.txt   241 TCGACGGGTAAACGGGGAATATGGGTTCTATTCCGGAGAGGGAGCCGTGAGAGATGGCTACCA 300
Octolasmis cor.txt       239 TCGACGGGTAAACGGGGAATATGGGTTCTATTCCGGAGAGGGAGCCGTGAGAGATGGCTACCA 298
Octolasmis sp.txt        241 TCGACGGGTAAACGGGGAATATGGGTTCTATTCCGGAGAGGGAGCCGTGAGAGATGGCTACCA 300

Ocolasmis lowei.txt        301 CATCTAAGGAAGGCGAGCAGGCGCGTAACCTTACCCACTCTCAGTCTCGAAGGAGGTAGTGACA 360
Octolasmis angulata.txt   301 CATCTAAGGAAGGCGAGCAGGCGCGTAACCTTACCCACTCTCAGTCTCGAAGGAGGTAGTGACA 360
Octolasmis cor.txt       299 CATCTAAGGAAGGCGAGCAGGCGCGTAACCTTACCCACTCTCAGTCTCGAAGGAGGTAGTGACA 358
Octolasmis sp.txt        301 CATCTAAGGAAGGCGAGCAGGCGCGTAACCTTACCCACTCTCAGTCTCGAAGGAGGTAGTGACA 360

Ocolasmis lowei.txt        361 ATAAATACCTTACAGAGGTCCTCGTTAACCGAGATCTCTCAAACGGAAATGAGTACAACTG 420
Octolasmis angulata.txt   361 ATAAATACCTTACAGAGGTCCTCGTTAACCGAGATCTCTCAAACGGAAATGAGTACAACTG 420
Octolasmis cor.txt       359 ATAAATACCTTACAGAGGTCCTCGTTAACCGAGATCTCTCAAACGGAAATGAGTACAACTG 418
Octolasmis sp.txt        361 ATAAATACCTTACAGAGGTCCTCGTTAACCGAGATCTCTCAAACGGAAATGAGTACAACTG 420

Ocolasmis lowei.txt        421 AATCCTTTAACGAGGATCGACTGGAGGGCAAGCCTGGTGGCCAGCAGCCGCGTAATTCCA 480
Octolasmis angulata.txt   421 AATCCTTTAACGAGGATCGACTGGAGGGCAAGCCTGGTGGCCAGCAGCCGCGTAATTCCA 480
Octolasmis cor.txt       419 AATCCTTTAACGAGGATCGACTGGAGGGCAAGCCTGGTGGCCAGCAGCCGCGTAATTCCA 478
Octolasmis sp.txt        421 AATCCTTTAACGAGGATCGACTGGAGGGCAAGCCTGGTGGCCAGCAGCCGCGTAATTCCA 480

Ocolasmis lowei.txt        481 SCTCCAGTAGCGTATATTTAAAGCTGTTGCGGTTAAAAAGCTCGTAGTTGGATATCAGTGC 540
Octolasmis angulata.txt   481 SCTCCAGTAGCGTATATTTAAAGCTGTTGCGGTTAAAAAGCTCGTAGTTGGATATCAGTGC 540
Octolasmis cor.txt       479 SCTCCAGTAGCGTATATTTAAAGCTGTTGCGGTTAAAAAGCTCGTAGTTGGATATCAGTGC 538
Octolasmis sp.txt        481 SCTCCAGTAGCGTATATTTAAAGCTGTTGCGGTTAAAAAGCTCGTAGTTGGATATCAGTGC 540

Ocolasmis lowei.txt        541 STGTCCGGTCCGGCATGCCCGGTGCGTTATGGCGGCACCGCGATGACGCCCGGGCTCCCA 600
Octolasmis angulata.txt   541 STGTCCGGTCCGGCATGCCCGGTGCGTTATGGCGGCACCGCGATGACGCCCGGGCTCCCA 600
Octolasmis cor.txt       539 STGTCCGGTCCGGCATGCCCGGTGCGTTATGGCGGCACCGCGATGACGCCCGGGCTCCCA 598
Octolasmis sp.txt        541 STGTCCGGTCCGGCATGCCCGGTGCGTTATGGCGGCACCGCGATGACGCCCGGGCTCCCA 600

Ocolasmis lowei.txt        601 AATGTCGGCTGGCCGCATTCAATCTGTGCGGATCCGTCGACGGGCGGTTCTTCGGAGGGG 660
Octolasmis angulata.txt   601 AATGTCGGCTGGCCGCATTCAATCTGTGCGGATCCGTCGACGGGCGGTTCTTCGGAGGGG 660
Octolasmis cor.txt       599 AATGTCGGCTGGCCGCATTCAATCTGTGCGGATCCGTCGACGGGCGGTTCTTCGGAGGGG 658
Octolasmis sp.txt        601 AATGTCGGCTGGCCGCATTCAATCTGTGCGGATCCGTCGACGGGCGGTTCTTCGGAGGGG 660

Ocolasmis lowei.txt        661 CCTGTTGGCGACCGGGGCGTTACCTTGAAACAAATTAGAGTGCTCAAAGCAGGCTCTTAA 720
Octolasmis angulata.txt   661 CCTGTTGGCGACCGGGGCGTTACCTTGAAACAAATTAGAGTGCTCAAAGCAGGCTCTTAA 720
Octolasmis cor.txt       659 CCTGTTGGCGACCGGGGCGTTACCTTGAAACAAATTAGAGTGCTCAAAGCAGGCTCTTAA 718
Octolasmis sp.txt        661 CCTGTTGGCGACCGGGGCGTTACCTTGAAACAAATTAGAGTGCTCAAAGCAGGCTCTTAA 720

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Ocolasmis lowei.txt	721	TGCCGTGTATACATATTTCATGGAATTGGAGAATACGTCCTGGCTCGATTTGGTTGGTTTT	780
Octolasmis angulata.txt	721	TGCCGTGTATACATATTTCATGGAATTGGAGAATACGTCCTGGCTCGATTTGGTTGGTTTT	780
Octolasmis cor.txt	719	TGCCGTGTATACATATTTCATGGAATTGGAGAATACGTCCTGGCTCGATTTGGTTGGTTTT	778
Octolasmis sp.txt	721	TGCCGTGTATACATATTTCATGGAATTGGAGAATACGTCCTGGCTCGATTTGGTTGGTTTT	780
Ocolasmis lowei.txt	781	SAGAGTCGAAGGGAAATGATTAATAGGGACTGACGGAGGCATTTCGATTGCGACCGGAGG	840
Octolasmis angulata.txt	781	SAGAGTCGAAGGGAAATGATTAATAGGGACTGACGGAGGCATTTCGATTGCGACCGGAGG	840
Octolasmis cor.txt	779	SAGAGTCGAAGGGAAATGATTAATAGGGACTGACGGAGGCATTTCGATTGCGACCGGAGG	838
Octolasmis sp.txt	781	SAGAGTCGAAGGGAAATGATTAATAGGGACTGACGGAGGCATTTCGATTGCGACCGGAGG	840
Ocolasmis lowei.txt	841	SGTGAAATCCTGTGACCGTCGCACGACGAACTACTGCGAAAACATTTGCCGAGAATGTTT	900
Octolasmis angulata.txt	841	SGTGAAATCCTGTGACCGTCGCACGACGAACTACTGCGAAAACATTTGCCGAGAATGTTT	900
Octolasmis cor.txt	839	SGTGAAATCCTGTGACCGTCGCACGACGAACTACTGCGAAAACATTTGCCGAGAATGTTT	898
Octolasmis sp.txt	841	SGTGAAATCCTGTGACCGTCGCACGACGAACTACTGCGAAAACATTTGCCGAGAATGTTT	900
Ocolasmis lowei.txt	901	TCATTAGTCAAGAACGAAAGTTAGAGGTTTCAAGGCGATCAGATACCGCCCTAGTTCATA	960
Octolasmis angulata.txt	901	TCATTAGTCAAGAACGAAAGTTAGAGGTTTCAAGGCGATCAGATACCGCCCTAGTTCATA	960
Octolasmis cor.txt	899	TCATTAGTCAAGAACGAAAGTTAGAGGTTTCAAGGCGATCAGATACCGCCCTAGTTCATA	958
Octolasmis sp.txt	901	TCATTAGTCAAGAACGAAAGTTAGAGGTTTCAAGGCGATCAGATACCGCCCTAGTTCATA	960
Ocolasmis lowei.txt	961	CCGTAAACGATGTGACCGAGCAATCCGCAACGGTCACTTAAAGGACTGTGCGGGCAGCTT	1020
Octolasmis angulata.txt	961	CCGTAAACGATGTGACCGAGCAATCCGCAACGGTCACTTAAAGGACTGTGCGGGCAGCTT	1020
Octolasmis cor.txt	959	CCGTAAACGATGTGACCGAGCAATCCGCAACGGTCACTTAAAGGACTGTGCGGGCAGCTT	1018
Octolasmis sp.txt	961	CCGTAAACGATGTGACCGAGCAATCCGCAACGGTCACTTAAAGGACTGTGCGGGCAGCTT	1020
Ocolasmis lowei.txt	1021	TCCCGGAGAAATCAGAGTGTITGGACTCCGGGGGAAGTATGGTTGCAAAGCTGAAACTTA	1080
Octolasmis angulata.txt	1021	TCCCGGAGAAATCAGAGTGTITGGACTCCGGGGGAAGTATGGTTGCAAAGCTGAAACTTA	1080
Octolasmis cor.txt	1019	TCCCGGAGAAATCAGAGTGTITGGACTCCGGGGGAAGTATGGTTGCAAAGCTGAAACTTA	1078
Octolasmis sp.txt	1021	TCCCGGAGAAATCAGAGTGTITGGACTCCGGGGGAAGTATGGTTGCAAAGCTGAAACTTA	1080
Ocolasmis lowei.txt	1081	AAGGAATTGACGGAAGGGCCACCAGGAGTGGAGCTTTCGGCTTAATTTGACTCAACAC	1140
Octolasmis angulata.txt	1081	AAGGAATTGACGGAAGGGCCACCAGGAGTGGAGCTTTCGGCTTAATTTGACTCAACAC	1140
Octolasmis cor.txt	1079	AAGGAATTGACGGAAGGGCCACCAGGAGTGGAGCTTTCGGCTTAATTTGACTCAACAC	1138
Octolasmis sp.txt	1081	AAGGAATTGACGGAAGGGCCACCAGGAGTGGAGCTTTCGGCTTAATTTGACTCAACAC	1140
Ocolasmis lowei.txt	1141	GGGACAACTCACAGGCCCGGACCCGTAAGGATTGACAGACTGATAGCTCTCTCTTGAT	1200
Octolasmis angulata.txt	1141	GGGACAACTCACAGGCCCGGACCCGTAAGGATTGACAGACTGATAGCTCTCTCTTGAT	1200
Octolasmis cor.txt	1139	GGGACAACTCACAGGCCCGGACCCGTAAGGATTGACAGACTGATAGCTCTCTCTTGAT	1198
Octolasmis sp.txt	1141	GGGACAACTCACAGGCCCGGACCCGTAAGGATTGACAGACTGATAGCTCTCTCTTGAT	1200
Ocolasmis lowei.txt	1201	TCAGTGGGTGGTGGTGCATGGCCGTTCTTAGTTGGTGGAGTGATTTGTCTGGTTTATTCC	1260
Octolasmis angulata.txt	1201	TCAGTGGGTGGTGGTGCATGGCCGTTCTTAGTTGGTGGAGTGATTTGTCTGGTTTATTCC	1260
Octolasmis cor.txt	1199	TCAGTGGGTGGTGGTGCATGGCCGTTCTTAGTTGGTGGAGTGATTTGTCTGGTTTATTCC	1258
Octolasmis sp.txt	1201	TCAGTGGGTGGTGGTGCATGGCCGTTCTTAGTTGGTGGAGTGATTTGTCTGGTTTATTCC	1260
Ocolasmis lowei.txt	1261	SATAACGAACGAGACTCTGGCCATTAAACTTGACGCCGCCAGTCCCTTATGTGACTGGGG	1320
Octolasmis angulata.txt	1261	SATAACGAACGAGACTCTGGCCATTAAACTTGACGCCGCCAGTCCCTTATGTGACTGGGG	1320
Octolasmis cor.txt	1259	SATAACGAACGAGACTCTGGCCATTAAACTTGACGCCGCCAGTCCCTTATGTGACTGGGG	1318
Octolasmis sp.txt	1261	SATAACGAACGAGACTCTGGCCATTAAACTTGACGCCGCCAGTCCCTTATGTGACTGGGG	1320
Ocolasmis lowei.txt	1321	TGTGCTTCTTAGAGGGATCATCGGCGTCCCAGCCGAAAGGAAAGGGAGCAATAACAGGCT	1380
Octolasmis angulata.txt	1321	TGTGCTTCTTAGAGGGATCATCGGCGTCCCAGCCGAAAGGAAAGGGAGCAATAACAGGCT	1380
Octolasmis cor.txt	1319	TGTGCTTCTTAGAGGGATCATCGGCGTCCCAGCCGAAAGGAAAGGGAGCAATAACAGGCT	1378
Octolasmis sp.txt	1321	TGTGCTTCTTAGAGGGATCATCGGCGTCCCAGCCGAAAGGAAAGGGAGCAATAACAGGCT	1380
Ocolasmis lowei.txt	1381	GTGATGCCCTTAGATGTTCTGGGCTGCACGCGTGTACACTGAAGTGGTCAGCGCGCCGT	1440
Octolasmis angulata.txt	1381	GTGATGCCCTTAGATGTTCTGGGCTGCACGCGTGTACACTGAAGTGGTCAGCGCGCCGT	1440
Octolasmis cor.txt	1379	GTGATGCCCTTAGATGTTCTGGGCTGCACGCGTGTACACTGAAGTGGTCAGCGCGCCGT	1438
Octolasmis sp.txt	1381	GTGATGCCCTTAGATGTTCTGGGCTGCACGCGTGTACACTGAAGTGGTCAGCGCGCCGT	1440
Ocolasmis lowei.txt	1441	TCAACGTCCTTTCGGAGAGGAGCGGGCAAACGTTTGAACCTTTTCTGATGGGAA---	1483
Octolasmis angulata.txt	1441	TCAACGTCCTTTCGGAGAGGAGCGGGCAAACGTTTGAACCTTTTCTGATGGGAA---	1497
Octolasmis cor.txt	1439	TCAACGTCCTTTCGGAGAGGAGCGGGCAAACGTTTGAACCTTTTCTGATGGGAAATGG	1498
Octolasmis sp.txt	1441	TCAACGTCCTTTCGGAGAGGAGCGGGCAAACGTTTGAACCTTTTCTGATGGGAA---	1473
Ocolasmis lowei.txt	1483	--	1483
Octolasmis angulata.txt	1497	--	1497
Octolasmis cor.txt	1499	GG	1500
Octolasmis sp.txt	1473	--	1473

Lampiran 3. Pensejajaran berganda nukleotida pada gen 28 rDNA  
*Octolasmis cor*, *Octolasmis angulata*, *Octolasmis* spp dan  
*Octolasmis lowei*

Octolasmis angulata.txt	1	STGTTTCGGGACGAGTCCCTCCTTCGAGTCGGGTTGTTTCGCTAATGCAGCCCTAAGCAGGT	60
Octolasmis lowei.txt	1	STGTTTCGGGACGAGTCCCTCCTTCGAGTCGGGTTGTTTCGCTAATGCAGCCCTAAGCAGGT	60
Octolasmis sp.txt	1	STGTTTCGGGACGAGTCCCTCCTTCGAGTCGGGTTGTTTCGCTAATGCAGCCCTAAGCAGGT	60
Octolasmis angulata.txt	61	SGTAAGCTCCATCTAAAGCTAAATATAACCACGAGTCCGATAGTCAACAAGTACAGTGAT	120
Octolasmis lowei.txt	61	SGTAAGCTCCATCTAAAGCTAAATATAACCACGAGTCCGATAGTCAACAAGTACAGTGAT	120
Octolasmis sp.txt	61	SGTAAGCTCCATCTAAAGCTAAATATAACCACGAGTCCGATAGTCAACAAGTACAGTGAT	120
Octolasmis angulata.txt	121	GGAAAGTTGAAAAGTACTCTGAAGAGAGAGTCAAATAGCCCGTGAAGCTGCCAGTATGGG	180
Octolasmis lowei.txt	121	GGAAAGTTGAAAAGTACTCTGAAGAGAGAGTCAAATAGCCCGTGAAGCTGCCAGTATGGG	180
Octolasmis sp.txt	121	GGAAAGTTGAAAAGTACTCTGAAGAGAGAGTCAAATAGCCCGTGAAGCTGCCAGTATGGG	180
Octolasmis angulata.txt	181	ATTAAGCGCACATGCGGGCGGTGTCTGTCGGACAAATAGCCGACTGTCTGTGCGTACGCTCTG	240
Octolasmis lowei.txt	181	ATTAAGCGCACATGCGGGCGGTGTCTGTCGGACAAATAGCCGACTGTCTGTGCGTACGCTCTG	240
Octolasmis sp.txt	181	ATTAAGCGCACATGCGGGCGGTGTCTGTCGGACAAATAGCCGACTGTCTGTGCGTACGCTCTG	240
Octolasmis angulata.txt	241	GTSTGGTSTGCTCTTSACTCGGCGTGCATTCCTCCSGTGTCTGCTGCGTGCCTCAGAACGC	300
Octolasmis lowei.txt	241	CGSTGGTATGTCTCTTTTCGGCGTGTATCTCAGTGGATTGTCTGCGTGCCTCAGAACGC	299
Octolasmis sp.txt	241	GTSTGGTSTGCTCTTSACTCGGCGTGCATTCCTCCSGTGTCTGCTGCGTGCCTCAGAACGC	300
Octolasmis angulata.txt	301	TTCCCTTTGTTTCGGCATTGACAGGTTCGGGGCTTCGTTGTCTCATGGTCTTATTGCCGACAG	360
Octolasmis lowei.txt	300	TTCCCTTTGTTTCGGCATTGACAGGTTCGGGGCTTCGTTGTCTCATGGTCTTATTGCCGACAG	359
Octolasmis sp.txt	301	TTCCCTTTGTTTCGGCATTGACAGGTTCGGGGCTTCGTTGTCTCATGGTCTTATTGCCGACAG	360
Octolasmis angulata.txt	361	TGATCTSCAGAGCCGTGTCTGGGCGGTCTCGACTTCGGTCTCATGGCGTCTCCGCTGAA	420
Octolasmis lowei.txt	360	TGATCTSCAGAGCCGTGTCTGGGCGGTCTCGACTTCGGTCTCATGGCGTCTCCGCTGAA	419
Octolasmis sp.txt	361	TGATCTSCAGAGCCGTGTCTGGGCGGTCTCGACTTCGGTCTCATGGCGTCTCCGCTGAA	420
Octolasmis angulata.txt	421	TGTGGTCCTTTGTGGACGACGCGGTCTGGCTTGGTCTGCGGTGCAATGCTGTCTGATTC	480
Octolasmis lowei.txt	420	TGTGGTCCTTTGTGGACGACGCGGTCTGGCTTGGTCTGCGGTGCAATGCTGTCTGATTC	477
Octolasmis sp.txt	421	TGTGGTCCTTTGTGGACGACGCGGTCTGGCTTGGTCTGCGGTGCAATGCTGTCTGATTC	480
Octolasmis angulata.txt	481	GAACGACCTGSACTGACGGCCAAACGCATTTCGAATCTACGATTCGGCTCGCTCTTTGCGCT	539
Octolasmis lowei.txt	478	GAACGACTTGGCTGACGGCCAAACGCATTTCGAACCTTGTCTGCTTCGGCTCGACTTTGCGCT	537
Octolasmis sp.txt	481	GAACGACCTGSACTGACGGCCAAACGCATTTCGAATCTACGATTCGGCTCGCTCTTTGCGCT	539
Octolasmis angulata.txt	540	STCACTSTGCGGCCCGTCTTGAAACACGGACCAAGGAGTCTAACATGTGAGCGGAGCGATTG	599
Octolasmis lowei.txt	538	STCACTSTGCGGCCCGTCTTGAAACACGGACCAAGGAGTCTAACATGTGAGCGGAGCGATTG	597
Octolasmis sp.txt	540	STCACTSTGCGGCCCGTCTTGAAACACGGACCAAGGAGTCTAACATGTGAGCGGAGCGATTG	599
Octolasmis angulata.txt	600	AGATTGTGGAATCTCAAACGCGCAATGAAAGTGAAGTGTCTGCTGACGGCACGAGCGGTG	659
Octolasmis lowei.txt	598	AGATTGTGGAATCTCAAACGCGCAATGAAAGTGAAGTGTCTGCTGACGGCACGAGCGGTG	657
Octolasmis sp.txt	600	AGATTGTGGAATCTCAAACGCGCAATGAAAGTGAAGTGTCTGCTGACGGCACGAGCGGTG	659
Octolasmis angulata.txt	660	ATCTGTCTGTCACCTTTGCTGGCTGAGCGCAACCCGCGGGCCCGCCATGGGCTGGCTTGC	717
Octolasmis lowei.txt	658	ATCTGTCTGTCACCTTTGCTGGCTGAGCGCAACCCGCGGGCCCGCCATGGGCTGGCTTGC	717
Octolasmis sp.txt	660	ATCTGTCTGTCACCTTTGCTGGCTGAGCGCAACCCGCGGGCCCGCCATGGGCTGGCTTGC	717
Octolasmis angulata.txt	718	TTCTTSTGGAGCACTGCTCAGGCGCGGACCTAGAGCCACACGTTGGGACCCGAAAGAT	777
Octolasmis lowei.txt	718	TTCTTSTGGAGCACTGCTCAGGCGCGGACCTAGAGCCACACGTTGGGACCCGAAAGAT	774
Octolasmis sp.txt	718	TTCTTSTGGAGCACTGCTCAGGCGCGGACCTAGAGCCACACGTTGGGACCCGAAAGAT	777
Octolasmis angulata.txt	778	SGTGAACTATGCTTGGTCAGGATGAAGCCAGAGGAACTCTGGTGGAGGTCCGCCGCGAT	837
Octolasmis lowei.txt	775	SGTGAACTATGCTTGGTCAGGATGAAGCCAGAGGAACTCTGGTGGAGGTCCGCCGCGAT	834
Octolasmis sp.txt	778	SGTGAACTATGCTTGGTCAGGATGAAGCCAGAGGAACTCTGGTGGAGGTCCGCCGCGAT	837
Octolasmis angulata.txt	838	FCTGACGTGCAAACTCGATCGTCTGAACTGGGTATAGGGGCGAAAGACCAATCGAACCATC	897
Octolasmis lowei.txt	835	FCTGACGTGCAAACTCGATCGTCTGAACTGGGTATAGGGGCGAAAGACCAATCGAACCATC	894
Octolasmis sp.txt	838	FCTGACGTGCAAACTCGATCGTCTGAACTGGGTATAGGGGCGAAAGACCAATCGAACCATC	897

Octolasmis angulata.txt	898	TAGTAGCTGGTTCCGCCCGAAGTTTCCCTCAGGATAGCTGGCGCTTGTCTGATACGGAGT	957
Octolasmis lowei.txt	895	TAGTAGCTGGTTCCGCCCGAAGTTTCCCTCAGGATAGCTGGCGCTTGTCTGATACGGAGT	954
Octolasmis sp.txt	898	TAGTAGCTGGTTCCGCCCGAAGTTTCCCTCAGGATAGCTGGCGCTTGTCTGATACGGAGT	957
Octolasmis angulata.txt	958	TTCATCCGGTAAAGCGAATGATTAGAGGAGCTGGGGTCCCTGCGACCTCAACCTATTCTC	1017
Octolasmis lowei.txt	955	TTCATCCGGTAAAGCGAATGATTAGAGGAGCTGGGGTCCCTGCGACCTCAACCTATTCTC	1014
Octolasmis sp.txt	958	TTCATCCGGTAAAGCGAATGATTAGAGGAGCTGGGGTCCCTGCGACCTCAACCTATTCTC	1017
Octolasmis angulata.txt	1018	AAACTTTCAATGGGTGAGACGCTCTCGCTGGCTTCAGTGCAGCGACGACTCTGAATCCGAG	1077
Octolasmis lowei.txt	1015	AAACTTTCAATGGGTGAGACGCTCTCGCTGGCTTCAGTGCAGCGACGACTCTGAATCCGAG	1074
Octolasmis sp.txt	1018	AAACTTTCAATGGGTGAGACGCTCTCGCTGGCTTCAGTGCAGCGACGACTCTGAATCCGAG	1077
Octolasmis angulata.txt	1078	TGCCCAGTGGGCCACTTTTGGTAAGCAGA AACTGGCGATGCGGGATGAACCGCATGTCGAG	1137
Octolasmis lowei.txt	1075	TGCCCAGTGGGCCACTTTTGGTAAGCAGA AACTGGCGATGCGGGATGAACCGCATGTCGAG	1134
Octolasmis sp.txt	1078	TGCCCAGTGGGCCACTTTTGGTAAGCAGA AACTGGCGATGCGGGATGAACCGCATGTCGAG	1137
Octolasmis angulata.txt	1138	TTAAGGTGCCTAAGCGGACGCAAAATCAGATACCATGAAAGGTGTTGATTGCTCACGACAG	1197
Octolasmis lowei.txt	1135	TTAAGGTGCCTAAGCGGACGCAAAATCAGATACCATGAAAGGTGTTGATTGCTCACGACAG	1194
Octolasmis sp.txt	1138	TTAAGGTGCCTAAGCGGACGCAAAATCAGATACCATGAAAGGTGTTGATTGCTCACGACAG	1197
Octolasmis angulata.txt	1198	CAGGACGGTGGCCATGGAAGTCGGCA CCGCTAAGGAGTGTGTAACTCACTGCCGA	1257
Octolasmis lowei.txt	1195	CAGGACGGTGGCCATGGAAGTCGGCA CCGCTAAGGAGTGTGTAACTCACTGCCGA	1254
Octolasmis sp.txt	1198	CAGGACGGTGGCCATGGAAGTCGGCA CCGCTAAGGAGTGTGTAACTCACTGCCGA	1257
Octolasmis angulata.txt	1258	AGCAATCAGCCCTGAAAATGGATGGCGCTAAAGCGTTCCACCGATACTCGACCGTCGTCC	1317
Octolasmis lowei.txt	1255	AGCAATCAGCCCTGAAAATGGATGGCGCTAAAGCGTTCCACCGATACTCGACCGTCGTCC	1314
Octolasmis sp.txt	1258	AGCAATCAGCCCTGAAAATGGATGGCGCTAAAGCGTTCCACCGATACTCGACCGTCGTCC	1317
Octolasmis angulata.txt	1318	SCATSCGACGGACTTGTCTGTCTGACGCCACGACGAGTAGGGCGGCGGGCGGTGAGCG	1377
Octolasmis lowei.txt	1315	SCASBCGATGGACTTGTCTCATCTGACGCCACGACGAGTAGGGCGGCGGGCGGTGAGCG	1374
Octolasmis sp.txt	1318	SCATSCGACGGACTTGTCTGTCTGACGCCACGACGAGTAGGGCGGCGGGCGGTGAGCG	1377
Octolasmis angulata.txt	1378	TTGAAGGCGTGACCGTGAGGTAGCTGGAGCCGCCGTCGGTGCAGATCTTGGTGGTAGTA	1437
Octolasmis lowei.txt	1375	TTGAAGGCGTGACCGTGAGGTAGCTGGAGCCGCCGTCGGTGCAGATCTTGGTGGTAGTA	1434
Octolasmis sp.txt	1378	TTGAAGGCGTGACCGTGAGGTAGCTGGAGCCGCCGTCGGTGCAGATCTTGGTGGTAGTA	1437
Octolasmis angulata.txt	1438	SCAAATACACAAGCAAGAT-	1456
Octolasmis lowei.txt	1435	SCAAATACACAAGCAAGATCC	1455
Octolasmis sp.txt	1438	SCAAATACACAAGCAAGAT-	1456

LAMPIRAN 4. Data tingkat infestasi *Octolasmis* spp pada kepiting bakau di empat kabupaten di Sulawesi Selatan

Lokasi	Jumlah kepiting yang diperiksa	Jumlah Kepiting Yang terinfestasi	Jumlah Total Parasit <i>Octlasmis</i> spp	Jumlah rata-rata parasit persampel	Prevalensi parasit (%)	Intensitas parasit	Kandungan bahan organik (%)	salinitas
Pinrang	50	38	750	19,24 ± 35,94	56%	26,78	3,13 %	29-32
Siwa	50	42	2241	44,82 ± 64,71	84%	53,36	7,09 %	28-30
pangkep	50	29	274	5,48 ± 11,99	58%	9,45	4,40 %	28-31
Malili	50	5	73	1,46 ± 6,28	10%	14.6	0,7 %	25-27

## Data tingkat serangan pinrang

No	Panjang	Berat	Crypid	<i>O.Angulata</i>	<i>O.cor</i>	<i>O. spp</i>	Jumlah
1	7.8	89.83	32	0	0		32
2	9.63	131.61	34	100	41	2	177
3	7.36	56.13	0	2	0		2
4	7.26	26.77	0	9	0		9
5	6.84	63.86	0	0	0		0
6	6.9	26.07	0	0	0		0
7	5.53	29.42	0	0	0		0
8	6.05	90.72	0	0	0		0
9	4.65	18.6	0	0	0		0
10	3.85	11.15	0	0	0		0
11	4.68	17.25	0	0	0		0
12	6.91	15.89	0	0	0		0
13	4.69	18.21	0	0	0		0
14	4.67	7.21	0	0	0		0
15	4.46	12.11	0	0	0		0
16	5.1	16.57	1	3	0		4
17	5.91	22.14	7	0	0		7
18	3.7	9.76	0	0	0		0
19	4.13	6.06	0	0	0		0
20	4.96	15.35	1	3	1		5
21	4.41	5.95	0	0	0		0
22	5.38	21.96	0	0	0		0
23	5.67	26.42	0	0	0		0
24	10.33	197.95	21	57	61		139
25	9.15	53.28	0	0	0		0
26	7.55	30.34	9	0	0		9
27	5.9	29.15	2	7	0		9
28	7.05	63.83	2	15	18		35
29	7.2	47.78	5	6	20		31
30	6.71	44.19	10	4	2		16
31	11.2	233.2	5	23	23	5	56
32	9.6	144.9		5	7	2	14
33	8.4	63.6	3	8	9		20
34	6.5	59.4	2	10	9		21
35	6.7	38	0	0	0	0	0
36	7.2	45.7	5	4	6		15
37	9.3	87.7	0	3	16		19
38	7.4	53.5	7	0	3		10
39	7.6	63.1	0	0	0		0
40	7.6	85.6	3	12	1		16
41	7.3	71.5	2	5	3		10
42	7.3	57.1	0	0	0		0
43	6.6	44	0	8	5	5	18
44	5.7	28.8	0	0	0		0

45	5.6	31.1	1	2	2		5
46	6.7	51.6	1	2	1		4
47	4.8	32.1	0	0	0		0
48	6.3	71.5	2	7	3		12
49	5.2	44.2	4	7	1		12
50	7.8	84.1	10	15	14	4	43
total			169	317	246	18	750

a) Intensitas

$$intensitas = \frac{\sum Total \text{ parasit (individu)}}{\sum sampel \text{ kepiting yang terinfestasi parasit}} = \frac{750}{28} = 26,78571$$

b) Prevalensi

$$prevalensi = \frac{\sum sampel \text{ kepiting yang terinfestasi parasit}}{\sum sampel \text{ yang diamati}} = \frac{28}{50} = 0,56$$

= 56%

## Data tingkat serangan siwa

No	Panjang	Berat	Crypid	<i>O.angulata</i>	<i>O.cor</i>	<i>O. spp</i>	jumlah
1	6.1	37.8	6	1			7
2	7.8	74.8	2	1			3
3	8.8	122.3	12	81	62	6	161
4	7.8	69.8					0
5	8.4	98.1					0
6	8.8	16.3	9	3			12
7	7.8	80.1					0
8	7.8	18.7	10	6	7		23
9	8.6	87.2	15				15
10	7.5	76.2	2				2
11	7.9	86.5	14	1	1		16
12	7.9	98			2		2
13	7.7	79.1	10	30	8	2	50
14	8.1	104.2	12	132	89	28	261
15	7.1	58.5		7	42	2	51
16	7.4	71.7	14	63			77
17	8.2	106.8					0
18	7.5	73.4	9	2			11
19	7.7	74					0
20	6.5	59.1	5	43	24	1	73
21	9.2	128.6	12	4			16
22	7.1	65.6	3	20	13		36
23	7.3	72.9	2	12	18	3	35
24	6.6	52	15	66	21		102
25	6.5	53.2		11			11
26	7.8	78.8		1	8		9
27	8.8	112.7	40	110	56		206
28	7.5	68.4	2	71	64	21	158
29	7	45.1	1	5			6
30	6.3	38.9		11	15		26
31	7.3	56.4	1	28	9		38
32	8	75.7					0
33	6.1	40.8	1	23	16	1	41
34	7.4	70	1	1			2
35	7.9	82.6		7	5		12
36	7.4	40.1		16	17		33
37	8	67.9	7	17	32		56
38	7.3	70.4					0
39	6.3	38.5	1	1			2
40	5.8	39		33	19		52
41	4.3	90.6	4	23			27
42	7.8	85.2	7	56	38		101
43	7.5	68	2	23	12		37
44	8.4	105.9					0



45	7.6	75.8		6			6
46	8.7	115.8	98	105	83		286
47	8	84.8	1	1			2
48	8.1	102.2		4			4
49	7.8	99	16	36	30		82
50	8.3	103.1	4	105	46	19	174
total			338	1166	737	83	2324

a) Intensitas

$$intensitas = \frac{\sum Total\ parasit\ (individu)}{\sum\ sampel\ kepitung\ yang\ terinfeksi\ parasit} = \frac{2324}{42} = 52,3333$$

b) Prevalensi

$$prevalensi = \frac{\sum\ sampel\ kepitung\ yang\ terinfestasi\ parast}{\sum\ sampel\ yang\ diamati} = \frac{42}{50} = 0,84$$

= 84 %

## Data tingkat serangan Pangkep

No	Panjang	Berat	Crypid	<i>O.angulata</i>	<i>O.cor</i>	<i>O. spp</i>	Jumlah
1	7.4	81.3	5	17	4		26
2	7.3	62.3	1	1			2
3	8.4	82.2	1		1		2
4	8.1	74.2	6	10		1	17
5	8.3	85.6					0
6	8.5	97					0
7	7.3	60.6					0
8	7.4	67.3		3	4	1	8
9	7.8	67.7					0
10	7.4	67.3	3	9			12
11	8.1	90.9					0
12	7.2	86.6					0
13	6.8	54	4				4
14	7,8	73.1					0
15	7,9	70.7	5	28	7	2	42
16	8	99.5					0
17	7.6	67.6					0
18	6,3	46.9		4			4
19	7.1	60.8	1				1
20	6.8	52.1	2	4	2		8
21	6.9	54.1	4				4
22	6.6	46.1	1				1
23	7.5	70.9					0
24	7.9	79.9		4	4		8
25	6.9	58.2		2	5		7
26	7.6	66.9		6	1		7
27	7.2	50.9					0
28	7	47.8					0
29	8.1	84.6					0
30	8.6	115.5		2	2		4
31	7.6	69.9	10	27	35	3	75
32	7.5	86.1			1		1
33	8.8	100.7	11	1			12
34	7.8	76.7	1				1
35	7.7	89.3		1	4		5
36	7.9	87.9	1	5	2		8
37	7.8	89.7	1	1	2		4
38	8.1	81.7					0
39	8.3	92.1		1			1
40	8.4	105.9		3			3

41	6.5	57.4	1	3	1		5
42	7.6	97.8					0
43	9.1	147.8	2	3	1		6
44	6.6	62.9					0
45	6.3	52.4					0
46	8.8	117.8					0
47	5.6	30					0
48	6.3	47.4					0
49	7.7	79.7	1	1	1		3
50	8.6	135.3					0
	Total		61	136	77	7	281

c) Intensitas

$$intensitas = \frac{\sum \text{Total parasit (individu)}}{\sum \text{sampel kepiting yang terinfeksi parasit}} = \frac{28}{29} = 9,689655$$

d) Prevalensi

$$\begin{aligned} prevalensi &= \frac{\sum \text{sampel kepiting yang terinfestasi parasit}}{\sum \text{sampel yang diamati}} = \frac{29}{50} = 0,58 \\ &= 58\% \end{aligned}$$

## Data tingkat serangan Malili

No	Panjang	Berat	crypid	<i>O.Angulata</i>	<i>O. Cor</i>	<i>O. spp</i>	Jumlah
1	7.85	90.93					0
2	7.74	83.92					0
3	8.07	98.68					0
4	7.85	99.70					0
5	7.57	94.17					0
6	7.35	80.99					0
7	8.26	111.45					0
8	8.16	111.96	6	34			40
9	7.92	74.68					0
10	7.68	80.68					0
11	7.88	84					0
12	9.3	118.7		2	1		3
13	7.9	81.5					0
14	7.8	78.13					0
15	7.9	69.5					0
16	7.4	64.6					0
17	8.6	110.6	2	8			10
18	9.7	166.2	1	1			2
19	7.8	91.2					0
20	7.7	78.1					0
21	8.3	82.1					0
22	7.3	42.2					0
23	7.6	71					0
24	8.4	58.2	1	7	10		18
25	8.1	81.4					0
26	7.9	69.5					0
27	7.9	64.6					0
28	8.6	110.6					0
29	9.0	104.3					0
30	9.7	166.2					0
31	7.8	91.2					0
32	7.7	78.1					0
33	8.3	82.1					0
34	7.3	42.2					0
35	7.6	71.0					0
36	8.4	58.2					0
37	8.1	81.4					0
38	7.0	63.7					0
39	8.1	79.0					0
40	9.1	131.4					0
41	8.1	75.9					0
42	8.5	111.7					0
43	7.1	102.4					0

44	6.8	60.0					0
45	7.4	42.9					0
46	7.9	96.3					0
47	7.1	72.1					0
48	7.9	80.1					0
49	6.5	7.21					0
50	7.3	81.1					0
total			10	52	11		73

e) Intensitas

$$intensitas = \frac{\sum \text{Total parasit (individu)}}{\sum \text{sampel kepitung yang terinfeksi parasit}} = \frac{73}{5} = 14,6$$

f) Prevalensi

$$\begin{aligned} prevalensi &= \frac{\sum \text{sampel kepitung yang terinfestasi parasit}}{\sum \text{sampel yang diamati}} = \frac{5}{50} = 0,1 \\ &= 10\% \end{aligned}$$

LAMPIRAN 5. Hasil pengukuran parameter lingkungan di empat kabupaten pengambilan sampel kepiting bakau

a) Salinitas

1. Pinrang

Kode Sampel	Salinitas
1	32.0
2	29.0
3	29.0
4	31.0
5	30.0

2. Siwa

Kode Sampel	Salinitas
1	28.0
2	29.0
3	31.0
4	30.0
5	29.0

3. Malili

Kode Sampel	Salinitas
1	25.0
2	25.0
3	26.0
4	27.0
5	25.0

4. Pangkep

Kode Sampel	Salinitas
1	28.0
2	29.0
3	31.0
4	30.0
5	29.0

## b) Bahan Organik

## 1. Pinrang

Kode Sampel	Bahan Organik (%)
1	4,69
2	3,92
3	3,16
4	2,34
5	1,52

## 2. Siwa

Kode Sampel	Bahan Organik (%)
1	7,14
2	6,61
3	7,27
4	7,54
5	6,88

## 3. Luwu Timur

Kode Sampel	Bahan Organik (%)
1	0,7
2	0,7
3	0,7
4	0,7
5	0,7

## 4. Pangkep

Kode Sampel	Bahan Organik (%)
1	4,47
2	4,59
3	4,5
4	4,36
5	4,1

Lampiran 6. Hasil Uji *Chi-square* prevalensi parasit *Octolasmis* spp pada keping bakau di empat kabupaten di Sulawesi Selatan

**Case Processing Summary**

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
lokasi * VAR00002	200	100.0%	0	.0%	200	100.0%

**lokasi \* VAR00002 Crosstabulation**

Count		VAR00002		
		1	2	Total
lokasi	Luwu Timur	45	5	50
	Maros	22	28	50
	Pinrang	21	29	50
	Siwa	8	42	50
Total		96	104	200

**Chi-Square Tests**

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	56.891 <sup>a</sup>	3	.000
Likelihood Ratio	63.841	3	.000
Linear-by-Linear Association	50.005	1	.000
N of Valid Cases	200		



## Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	56.891 <sup>a</sup>	3	.000
Likelihood Ratio	63.841	3	.000
Linear-by-Linear Association	50.005	1	.000

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 24.00.

Lampiran 7. Hasil Uji *Kruskal-Wallis* intensitas parasit *Octolasmis* spp pada kepiting bakau di empat kabupaten di Sulawesi Selatan

## Kruskal-Wallis Test

## Ranks

Parasit		N	Mean Rank
Pinrang	cryptid	23	32.04
	<i>Octolasmis angulata</i>	24	42.75
	<i>Octolasmis cor</i>	21	38.36
	<i>Octolasmis</i> spp	5	26.50
	Total	73	
Wajo	cryptid	32	39.61
	<i>Octolasmis angulata</i>	39	58.58
	<i>Octolasmis cor</i>	26	68.04
	<i>Octolasmis</i> spp	9	38.89
	Total	106	
Maros	cryptid	19	29.03
	<i>Octolasmis angulata</i>	22	36.02
	<i>Octolasmis cor</i>	17	30.68
	<i>Octolasmis</i> spp	4	21.88
	Total	62	
Luwu Timur	cryptid	4	4.38

Octolasmis angulata	5	7.20
Octolasmis cor	2	6.25
Total	11	

Test Statistics<sup>a,b</sup>

	Pinrang	Wajo	Maros	Luwu Timur
Chi-Square	4.369	15.513	3.094	1.712
df	3	3	3	2
Asymp. Sig.	.224	.001	.377	.425

a. Kruskal Wallis Test

b. Grouping Variable: Parasit

Berdasarkan perhitungan diatas, maka hipotesis nol diterima pada daerah wajo, hal ini karena signifikan asymtot yang dihasilkan lebih keci 0,001 dari yang biasa digunakan yakni 0,05 ( $P < 0,05$ ) sehingga menunjukkan ada perbedaan intensitas setiap spesies antara keempat lokasi tersebut

Lampiran 8. Hasil Uji intensitas *Mann-Whitney* parasit *Octolasmis* spp pada keping bakau di empat kabupaten di Sulawesi Selatan

### Mann-Whitney Test

Ranks			
grup	N	Mean Rank	Sum of Ranks
Intensitas Maros	29	16.90	490.00
Luwu Timur	5	21.00	105.00
Total	34		

Test Statistics <sup>b</sup>	
	Intensitas
Mann-Whitney U	55.000
Wilcoxon W	490.000
Z	-.855
Asymp. Sig. (2-tailed)	.393
Exact Sig. [2*(1-tailed Sig.)]	.420 <sup>a</sup>

a. Not corrected for ties.

b. Grouping Variable: grup

## Mann-Whitney Test

**Ranks**

Grup		N	Mean Rank	Sum of Ranks
Intensitas	Wajo	36	22.04	793.50
	Luwu Timur	5	13.50	67.50
Total		41		

**Test Statistics<sup>b</sup>**

	Intensitas
Mann-Whitney U	52.500
Wilcoxon W	67.500
Z	-1.496
Asymp. Sig. (2-tailed)	.135
Exact Sig. [2*(1-tailed Sig.)]	.139 <sup>a</sup>

a. Not corrected for ties.

b. Grouping Variable: grup

## Mann-Whitney Test

**Ranks**

grup		N	Mean Rank	Sum of Ranks
Intensitas	Wajo	36	41.92	1509.00
	Maros	29	21.93	636.00
Total		65		

**Test Statistics<sup>a</sup>**

	Intensitas
Mann-Whitney U	201.000
Wilcoxon W	636.000
Z	-4.241
Asymp. Sig. (2-tailed)	.000

a. Grouping Variable: grup

## Mann-Whitney Test

**Ranks**

Grup		N	Mean Rank	Sum of Ranks
Intensitas	Pinrang	28	17.61	493.00
	Luwu Timur	5	13.60	68.00
	Total	33		

**Test Statistics<sup>b</sup>**

	Intensitas
Mann-Whitney U	53.000
Wilcoxon W	68.000
Z	-.855
Asymp. Sig. (2-tailed)	.393
Exact Sig. [2*(1-tailed Sig.)]	.419 <sup>a</sup>

a. Not corrected for ties.

b. Grouping Variable: grup

## Mann-Whitney Test

grup		N	Mean Rank	Sum of Ranks
Intensitas	Pinrang	28	37.32	1045.00
	Maros	29	20.97	608.00
Total		57		

	Intensitas
Mann-Whitney U	173.000
Wilcoxon W	608.000
Z	-3.727
Asymp. Sig. (2-tailed)	.000

a. Grouping Variable: grup

## Mann-Whitney Test

Grup		N	Mean Rank	Sum of Ranks
Intensitas	Pinrang	28	27.88	780.50
	Wajo	36	36.10	1299.50
	Total	64		

	Intensitas
Mann-Whitney U	374.500
Wilcoxon W	780.500
Z	-1.754
Asymp. Sig. (2-tailed)	.079

a. Grouping Variable: grup



LAMPIRAN 9. Hasil uji Korelasi Pearson antara panjang karapaks dan jumlah parasit yang terinfestasi

		Correlations	
		panjang karapaks	jumlah investasi
panjang karapaks	Pearson Correlation	1	.225**
	Sig. (2-tailed)		.001
	N	200	200
jumlah investasi	Pearson Correlation	.225**	1
	Sig. (2-tailed)	.001	
	N	200	200

\*\* . Correlation is significant at the 0.01 level (2-tailed).

Dari tabel correlations diatas terlihat bahwa korelasi *Pearson Product Moment*  $r = 0,225$  dan  $P\text{-value} = 0,001$  lebih kecil dari  $\alpha = 0,01$  atau  $P < 0,01$ .

Maka  $H_0 =$  ditolak

Kesimpulan ada hubungan linier yang signifikan antara panjang karapaks dan jumlah infestasi.

LAMPIRAN 10. Hasil uji Korelasi Pearson antara bahan organik dan prevalensi

		Correlations	
		panjang karapaks	jumlah investasi
panjang karapaks	Pearson Correlation	1	.225**
	Sig. (2-tailed)		.001
	N	200	200
jumlah investasi	Pearson Correlation	.225**	1
	Sig. (2-tailed)	.001	
	N	200	200

\*\* . Correlation is significant at the 0.01 level (2-tailed).

Dari tabel correlations diatas terlihat bahwa korelasi *Pearson Product Moment*  $r = 0,225$  dan  $P\text{-value} = 0,001$  lebih kecil dari  $\alpha = 0,01$  atau  $P < 0,01$ .

Maka  $H_0 =$  ditolak

Kesimpulan ada hubungan linier yang signifikan antara panjang karapaks dan jumlah infestasi.