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Lampiran 1. Uji *chi-square* Jumlah dan nisbah kelamin Cumi-cumi (*Sepioteuthis lessoniana* Lesson, 1830) jantan dan betina berdasarkan pengambilan sampel yang tertangkap di perairan Pulau Sanane, Kabupaten Pangkajene dan Kepulauan.

Waktu Pengambilan Sampel	Jantan	Betina	Unidentified sex	Jumlah
06 juli 2020	47	3	16	66
	37,8231	18,2769	9,9000	
22 juli 2020	29	19	9	57
	32,6654	15,7846	8,5500	
06 Agustus 2020	37	15	9	61
	34,9577	16,8923	9,1500	
15 Agustus 2020	36	35	5	76
	43,5538	21,0462	11,4000	
	149	72	39	260

$$X^2_{hitung} = \frac{[(47 - 37.8231)^2/37.8231]}{37.8231} + \frac{[(29 - 32.6654)^2 / 32.6654]}{32.6654} + \frac{[(37 - 34.9577)^2/37.9577]}{37.9577} + \frac{[(36 - 43.5538)^2/43.5538]}{43.5538} + \frac{[(3 - 18.2769)^2/18.2769]}{18.2769} + \frac{[(19 - 15.7846)^2/ 15.7846]}{15.7846} + \frac{[(15 - 16.8923)^2/16.8923]}{16.8923} + \frac{[(35 - 21,0462)^2/ 28.7376]}{28.7376} + \frac{[(16 - 9,9000)^2/9,9000]}{9,9000} + \frac{[(9 - 8,5500)^2/8,5500]}{8,5500} + \frac{[(9 - 9,1500)^2/9,1500]}{9,1500} + \frac{[(5 - 11,4000)^2/11,4000]}{11,4000}$$

$$X^2_{hitung} = 2,2266 + 0,4113 + 0,1193 + 1,3101 + 12,7693 + 0,6550 + 0,2120 + 9,2516 + 3,7586 + 0,0237 + 0,0025 + 3,5930$$

$$X^2_{hitung} = 34,3329$$

$$X^2_{tabel} = 9,4877$$

$X^2_{hitung} > X^2_{tabel}$ berarti jumlah cumi-cumi jantan dan betina yang tertangkap di perairan Pulau Sanane selama penelitian berbeda nyata (nisbah kelamin bukan 1.00 : 1.00).

Lampiran 2. Uji *chi-square* Jumlah dan nisbah kelamin Cumi-cumi (*Sepioteuthis lessoniana* Lesson, 1830) jantan dan betina berdasarkan Tingkat Kematangan Gonad (TKG) yang tertangkap di perairan Pulau Sanane, Kabupaten Pangkajene dan Kepulauan.

TKG	JANTAN	BETINA	JUMLAH
I	44	35	79
	53,2624	25,7376	
II	50	13	63
	42,4751	20,5249	
III	32	15	47
	31,6878	15,3122	
IV	23	9	32
	21,5747	10,4253	
JUMLAH	149	72	221

$$X^2_{\text{hitung}} = \left[\frac{(44 - 53,2624)^2}{53,2624} \right] + \left[\frac{(50 - 42,4751)^2}{42,4751} \right] + \left[\frac{(32 - 31,6878)^2}{31,6878} \right] + \left[\frac{(23 - 21,5747)^2}{21,5747} \right] + \left[\frac{(35 - 25,7376)^2}{25,7376} \right] + \left[\frac{(13 - 20,5249)^2}{20,5249} \right] + \left[\frac{(15 - 15,3122)^2}{15,3122} \right] + \left[\frac{(9 - 10,4253)^2}{10,4253} \right]$$

$$X^2_{\text{hitung}} = 1,6108 + 1,3331 + 0,0031 + 0,0942 + 3,3334 + 2,7588 + 0,0064 + 0,1949$$

$$X^2_{\text{hitung}} = 9,3345$$

$$X^2_{\text{tabel}} = 9,4877$$

$X^2_{\text{hitung}} < X^2_{\text{tabel}}$ berarti jumlah cumi-cumi jantan dan betina yang tertangkap di perairan Pulau Sanane selama penelitian berbeda nyata (nisbah kelamin bukan 1.00 : 1.00).

Lampiran 3. Distribusi jumlah cumi-cumi matang gonad dan jumlah cumi-cumi belum matang gonad berdasarkan panjang total serta perhitungan pendugaan rata-rata panjang total pertama kali matang gonad Cumi-cumi (*Sepioteuthis lessoniana* Lesson, 1830)) jantan yang tertangkap di Pulau Sanane, Kabupaten Pangkajene dan Kepulauan.

Panjang kelas	Tengah Kelas	LOG tengah kelas (Xi)	Jumlah sampel cumi-cumi (ni)	Jumlah cumi-cumi belum matang	Jumlah cumi-cumi matang	Proporsi cumi-cumi matang (Pi)	Xi+1-Xi=X	qi=1-pi	<u>pi x qi</u> ni-1
137 - 163	150	2,1761	1	0	1	1,0000	0,0768	0,0000	0,0000
164 - 195	179	2,2529	0	0	0	0,0000	0,0776	1,0000	0,0000
196 - 233	214	2,3304	0	0	0	0,0000	0,0778	1,0000	0,0000
234 - 279	256	2,4082	7	5	2	0,2857	0,0775	0,7143	0,0340
280 - 334	306	2,4857	42	31	11	0,2619	0,0778	0,7381	0,0047
335 - 399	366	2,5635	61	43	18	0,2951	0,0780	0,7049	0,0035
400 - 477	438	2,6415	28	15	13	0,4643	0,0770	0,5357	0,0092
478 - 568	523	2,7185	10	0	10	1,0000			
			149			3,3070			0,0422

Lampiran 3. Lanjutan.

$$\log m = X_k + \frac{X}{2} - \{ x \sum p_i \}$$

$$\log m = 2.7185 + \frac{0.0770}{2} - (0.0770 \times 3.3070)$$

$$\log m = 2.7185 + 0.0385 - 0.2547$$

$$\log m = 2.5023$$

$$M = \text{antilog } 2.5023 = 317.91 \text{ mm}$$

Dengan selang kepercayaan 95%, maka:

$$\begin{aligned} M &= \text{antilog} \left[m \pm 1.96 \sqrt{X^2 \sum \left(\frac{p_i - q_i}{ni-1} \right)} \right] \\ &= \text{antilog} \left[2.5023 \pm 1.96 \sqrt{(0.0770)^2 \times 0.0422} \right] \\ &= \text{antilog} \left[2.5023 \pm 1.96 \sqrt{0.0059 \times 0.0422} \right] \\ &= \text{antilog} \left[2.5023 \pm 1.96 \times 0.0158 \right] \\ &= \text{antilog } 2.5023 \pm 0.0310 \end{aligned}$$

Jadi batas atas

$$\text{Antilog } (2.5023 + 0.0310) = 341.43 \text{ mm}$$

Batas bawah

$$\text{Antilog } (2.5023 - 0.0310) = 296.01 \text{ mm}$$

Lampiran 4. Distribusi jumlah cumi-cumi matang gonad dan jumlah cumi-cumi belum matang gonad berdasarkan panjang total serta perhitungan pendugaan rata-rata panjang total pertama kali matang gonad Cumi-cumi (*Sepioteuthis lessoniana* Lesson, 1830))betina yang tertangkap di Pulau Sanane, Kabupaten Pangkajene dan Kepulauan.

Panjang kelas	Tengah Kelas	LOG tengah kelas (Xi)	Jumlah sampel cumi-cumi (ni)	Jumlah cumi-cumi belum matang	Jumlah cumi-cumi matang	Proporsi cumi-cumi matang (Pi)	Xi+1-Xi=X	qi=1-pi	pi x qi ni-1
275 - 298	287	2,4579	3	3	0	0,0000	0,0363	1,0000	0,0000
299 - 324	312	2,4942	5	5	0	0,0000	0,0360	1,0000	0,0000
325 - 352	339	2,5302	5	5	0	0,0000	0,0368	1,0000	0,0000
353 - 383	369	2,5670	13	12	1	0,0769	0,0361	0,9231	0,0059
384 - 417	401	2,6031	20	14	6	0,3000	0,0363	0,7000	0,0111
418 - 453	436	2,6395	14	7	7	0,5000	0,0363	0,5000	0,0192
454 - 493	474	2,6758	4	0	4	1,0000	0,0360	0,0000	0,0000
494 - 537	515	2,7118	8	2	6	0,7500			
TOTAL			72			2,6269			0,0362

Lampiran 4. Lanjutan

$$\log m = X_k + \frac{X}{2} - \{ x \sum p_i \}$$

$$\log m = 2.7118 + \frac{0.0360}{2} - (0.0360 \times 2.6269)$$

$$\log m = 2.7118 + 0.0180 - 0.0946$$

$$\log m = 2.6352$$

$$M = \text{antilog } 2.6352 = 431.72 \text{ mm}$$

Dengan selang kepercayaan 95%, maka:

$$\begin{aligned} M &= \text{antilog} \left[m \pm 1.96 \sqrt{X^2 \sum \left(\frac{p_i - q_i}{n_i - 1} \right)} \right] \\ &= \text{antilog} \left[2.6342 \pm 1.96 \sqrt{(0.0360)^2 \times 0.0362} \right] \\ &= \text{antilog} \left[2.6352 \pm 1.96 \sqrt{0.0013 \times 0.0362} \right] \\ &= \text{antilog} \left[2.6352 \pm 1.96 \times 0.0069 \right] \\ &= \text{antilog } 2.6352 \pm 0.0134 \end{aligned}$$

Jadi batas atas

$$\text{Antilog } (2.6352 + 0.0134) = 445,25 \text{ mm}$$

Batas bawah

$$\text{Antilog } (2.6352 - 0.0134) = 418.60 \text{ mm}$$

Lampiran 5. Uji t-tes (Two-Sample Assuming Equal Variances Indeks Kematangan Gonad (IKG) berdasarkan waktu pengambilan sampel Cumi-cumi sirip besar (*Sepioteuthis lessoniana* Lesson, 1830) jantan dan betina yang tertangkap di perairan Pulau Sanane, Kabupaten Pangkajene dan Kepulauan.

Sampling 06 juli 2020

Sampling 22 juli 2020

	<i>IKG Jantan</i>	<i>IKG Betina</i>		<i>IKG Jantan</i>	<i>IKG Betina</i>
Mean	2,043254706	1,851528663	Mean	1,89170841	2,002691374
Variance	12,02298601	2,325624929	Variance	3,137059104	0,633880709
Observations	3	47	Observations	19	29
Hypothesized Mean Difference	0		Hypothesized Mean Difference	0	
Df	2		Df	23	
t Stat	0,09518553		t Stat	-0,25666971	
P(T<=t) one-tail	0,466422802		P(T<=t) one-tail	0,399857896	
t Critical one-tail	2,91998558		t Critical one-tail	1,713871528	
P(T<=t) two-tail	0,932845604		P(T<=t) two-tail	0,799715791	
t Critical two-tail	4,30265273		t Critical two-tail	2,06865761	

Sampling 06 Agustus 2020

Sampling 15 Agustus 2020

	<i>IKG Jantan</i>	<i>IKG Betina</i>		<i>IKG Jantan</i>	<i>IKG Betina</i>
Mean	2,109122028	2,790598791	Mean	1,042160604	2,550264128
Variance	4,136777841	3,177507641	Variance	3,929418951	3,116380868
Observations	15	37	Observations	35	36
Hypothesized Mean Difference	0		Hypothesized Mean Difference	0	
Df	23		Df	68	
t Stat	-1,133179075		t Stat	-3,382084602	
P(T<=t) one-tail	0,134406853		P(T<=t) one-tail	0,000598204	
t Critical one-tail	1,713871528		t Critical one-tail	1,667572281	
P(T<=t) two-tail	0,268813706		P(T<=t) two-tail	0,001196408	
t Critical two-tail	2,06865761		t Critical two-tail	1,995468931	

. Lampiran 6. Uji t-tes (Two-Sample Assuming Equal Variances Indeks Kematangan Gonad (IKG) berdasarkan Tingkat Kematangan Gonad Cumi-cumi sirip besar (*Sepioteuthis lessoniana* Lesson, 1830) jantan dan betina yang tertangkap di perairan Pulau Sanane, Kabupaten Pangkajene dan Kepulauan.

TKG I			TKG II		
	<i>IKG Jantan</i>	<i>IKG Betina</i>		<i>IKG Jantan</i>	<i>IKG Betina</i>
Mean	0,061231429	1,421797727	Mean	1,007546154	2,441886
Variance	0,001491578	0,87543233	Variance	0,079724468	2,927905928
Observations	35	44	Observations	13	50
Hypothesized Mean Difference	0		Hypothesized Mean Difference	0	
Df	43		Df	57	
t Stat	-9,635408623		t Stat	-5,639374073	
P(T<=t) one-tail	1,31623E-12		P(T<=t) one-tail	2,77982E-07	
t Critical one-tail	1,681070703		t Critical one-tail	1,672028888	
P(T<=t) two-tail	0,000000000		P(T<=t) two-tail	0,000000556	
t Critical two-tail	2,016692199		t Critical two-tail	2,002465459	

TKG III			TKG IV		
	<i>IKG Jantan</i>	<i>IKG Betina</i>		<i>IKG Jantan</i>	<i>IKG Betina</i>
Mean	3,640926667	3,0568125	Mean	4,481088889	2,508247826
Variance	2,922974092	3,954299664	Variance	2,807779646	0,609451237
Observations	15	32	Observations	9	23
Hypothesized Mean Difference	0		Hypothesized Mean Difference	0	
Df	32		Df	9	
t Stat	1,035109063		t Stat	3,391015925	
P(T<=t) one-tail	0,154188717		P(T<=t) one-tail	0,003993115	
t Critical one-tail	1,693888748		t Critical one-tail	1,833112933	
P(T<=t) two-tail	0,308377434		P(T<=t) two-tail	0,007986230	
t Critical two-tail	2,036933343		t Critical two-tail	2,262157163	

Lampiran 7. Kisaran diameter telur Cumi-cumi (*Sepioteuthis lessoniana* Lesson, 1830) betina yang tertangkap di Pulau Sanane, Kabupaten Pangkajene dan Kepulauan.

Diameter Telur (mm)			
TKG	Min	Max	n (butir)
II	0,1500	4,7244	2873
III	0,3000	6,8984	6249
IV	0,3674	6,9746	6410
Total	0,1500	6,9746	15532
