

The taxonomic status of *Pagurus bouvieri* (Faxon, 1895), an obscure name, and redescription of *Pagurus smithi* (Benedict, 1892), a poorly known species (Decapoda: Paguridae)

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ABSTRACT

The status of the obscure *Pagurus bouvieri* (Faxon, 1895), a replacement name proposed for the preoccupied *Eupagurus smithii* A. Milne-Edwards and Bouvier, 1893, was evaluated. Based on types and numerous unreported museum materials, *P. bouvieri* is found to be synonymous with *Pagurus politus* (Smith, 1882) a commonly encountered but infrequently discussed northwestern Atlantic species. The taxonomy and geographic distribution of *P. politus* is updated with a complete synonymy, redescription, and illustrations. The taxonomy of the northeastern Pacific species *Pagurus smithi* (Benedict, 1892) is also updated, including a redescription with illustrations.

KEYWORDS

Hermit crabs, Paguridae, *Pagurus bouvieri*, *Pagurus smithi*, taxonomy

INTRODUCTION

In a report on the “stalked-eyed Crustacea” from the eastern Pacific, Faxon (1895: 57) stated in a brief remark under *Eupagurus californiensis* (Benedict, 1892) (= *Phimochirus californiensis*) that A. Milne-Edwards and Bouvier (1893) had described a species from Sand Key, on the Gulf of Mexico coast of Florida, under the name *Eupagurus smithii*. Faxon noticed that this same name had previously been used by Benedict (1892, spelled *E. smithi*) for a species from the Gulf of California, in the eastern Pacific, and thus proposed the name *Eupagurus bouvieri* as replacement name for A. Milne-Edwards and Bouvier’s taxon. When the ICZN validated the name “*Pagurus* Fabricius, 1775” and placed “*Eupagurus* Brandt, 1851” in the Official Index of Rejected and Invalid Names in Zoology (Hemming, 1957; 1958), the Gulf of California and Gulf of Mexico species names became *Pagurus smithi* and *P. bouvieri*, respectively.

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Faxon's (1895) *Pagurus bouvieri* has been mentioned only in taxonomic lists (Williams et al., 1989; McLaughlin et al., 2005; 2010) since that name was proposed, although without any new specimens reported. While reviewing the taxonomic literature for species of *Pagurus* in the World Register of Marine Species (WoRMS Editorial Board, 2022), it was noticed that A. Milne-Edwards and Bouvier (1893: 143) mentioned that their *Eupagurus smithii* (= *Pagurus bouvieri*) had close affinities in morphology and habitat with *E. politus* Smith, 1882 (= *Pagurus politus*), and that the two differed slightly in the length of the chelipeds relative to the ambulatory legs, curvature, chitinous claws of the cheliped fingers, and armature of the carpi of the ambulatory legs. The suspicion that those characters might represent variations within a single species, together with the lack of distributional information on *P. bouvieri* beyond that originally reported by A. Milne-Edwards and Bouvier (1893) from Sand Key, Florida, prompted the evaluation of the type materials of these two species (*P. bouvieri* and *P. politus*) in order to ascertain if the two names indeed represented different species. The study of the type materials clearly showed that the characters presumed by A. Milne-Edwards and Bouvier to differentiate their taxon from *P. politus* are within the normal range of intra-specific variations observed in many species of *Pagurus*, and therefore the type specimens of both taxa represent the same species. Thus, *P. bouvieri* must be considered a junior synonym of *P. politus*. The full taxonomy of *P. politus* is presented herein along with a redescription, including morphological illustrations.

Benedict (1892) described the northeastern Pacific *Pagurus smithi* without including any illustrations or enough morphological details that could reliably be used to compare with the numerous other congeners currently in *Pagurus* Fabricius, 1775. Since then, only Glassell (1937), Haig et al. (1970), Hendrickx (1993), and Hendrickx and Harvey (1999), have reported this species, although none of those studies have added

any morphological information. The opportunity is taken herein to present a detailed taxonomy and redescription of this species, including illustrations.

MATERIALS AND METHODS

Specimens used for this study remain deposited in the Museum of Comparative Zoology, Harvard University, Cambridge, Massachusetts, USA (MCZ), and the National Museum of Natural History, Smithsonian Institution, Washington DC, USA (USNM). General morphological terminology follows McLaughlin (2003), except for the clarification of the numbering of cephalothoracic somites provided by Felder et al. (2019). Measurements indicated in the material examined sections are of cephalic shield length, taken to the nearest 0.1 mm, from the tip of the rostrum to the midpoint of the posterior margin of the shield.

Abbreviations used in the material examined sections and Tab. 1, include: BIMP, Georges Bank Monitoring Program (conducted by Batelle New England Marine Research Laboratory); CLTE, Carnegie Lab Tortugas Expedition; CABP, Middle Atlantic Outer Continental Shelf Environmental Studies (conducted by Virginia Institute of Marine Science); GoMRI, Gulf of Mexico Research Initiative (conducted by University of Louisiana-Lafayette); MARMAP, Marine Resources Monitoring & Assessment Prediction program (conducted by United States Department of Commerce, National Marine Fisheries Service); MMS, United States Department of Interior, Mineral Management Services; ovig, ovigerous females; months are indicated by first three letters; sta, station; SABP, South Atlantic Benchmark Program, Outer Continental Shelf Environmental Studies (conducted by Texas Instruments Incorporated); NEEB, New England Outer Continental Shelf Environmental Benchmark (conducted by Energy Resources Company Inc.); USFC, United States Fish Commission; USGS, United States Geodetic Survey.

Table 1. Material of *Pagurus politus* (Smith, 1882) deposited in the National Museum of Natural History (USNM), Smithsonian Institution, Washington DC, USA .

USNM no.	No. Specimens/Sex	Locality	Latitude	Longitude	Date Collected	Vessel	Station no.	Depth (m)
Eastern United States								
Massachusetts								
258924	1 unsexed	Georges Bank, Northern Slope	41°54'06"N	67°59'09"W	1 Mar 1977		NEEB 1:36-5	140
5945	1 unsexed	Georges Bank	41°13'00"N	66°21'50"W	4 Sep 1883	USFC Albatross	2080	101
1125656	1 unsexed	Georges Bank	40°50'42"N	68°00'12"W	21 Jul 1982	R/V Oceanus	MMS-BIMP/M05/04	67
5893	1 disintegrated	Martha's Vineyard	40°44'N	70°47'W	7 Sep 1881	USFC Fish Hawk	990	62
1125657	1 unsexed	Georges Bank	40°39'12"N	67°46'36"W	6 Jul 1981	R/V Eastward	MMS-BIMP/M01/05-11	86
5892	1 female	Nantucket	40°35'30"N	70°41'00"W	23 Aug 1883	USFC Fish Hawk	1163	57
306401	1 ovig female	Georges Bank, Lydonia Canyon	40°28'48"N	67°43'12"W	9 Nov 1981	R/V Oceanus	7	
56447	1 female	Martha's Vineyard	40°28'N	70°44'W	7 Sep 1881	USFC Fish Hawk	993	71
213035	1 male	Lydonia Canyon, off Massachusetts	40°22'N	67°41'W	18 Sep 1882	R/V Alvin	1269-3	462
8692	4 males	S of Nantucket Shoals	40°22'17"N	69°51'30"W	27 Sep 1884	USFC Albatross	2251	79
8711	3 males	S of Nantucket Shoals	40°19'30"N	69°29'10"W	28 Sep 1884	USFC Albatross	2259	75
6389	1 male	Nantucket	40°15'N	70°29'W	23 Aug 1883	USFC Fish Hawk	1156	110
6394	1 male	Nantucket	40°14'N	70°29'W	23 Aug 1883	USFC Fish Hawk	1157	113
3345	8 males, 3 females, 1 ovig female	Martha's Vineyard	40°07'00"N	70°32'00"W	23 Aug 1881	USFC Fish Hawk	950	130
5418	5 males, 1 female, 1 ovig female	Nantucket Shoals	40°05'05"N	70°35'00"W	20 Sep 1883	USFC Albatross	2086	126
5370	6 males	Nantucket Shoals	40°05'00"N	70°34'45"W	20 Sep 1883	USFC Albatross	2085	128
5899	5 males	Martha's Vineyard	40°05'N	70°23'W	4 Sep 1880	USFC Fish Hawk	865	119
5585	19 males, 5 females	SW of Nantucket Shoals	40°04'00"N	70°28'50"W	25 May 1883	USFC Albatross	2026	240
4693	12 males, 3 females, 1 ovig female	Martha's Vineyard	40°04'N	68°49'W	26 Aug 1882	USFC Fish Hawk	1121	428
4996	7 males, 1 female, 2 ovig females	Martha's Vineyard	40°03'N	70°38'W	22 Aug 1882	USFC Fish Hawk	1109	163
3342	12 males, 3 females, 1 ovig female	Martha's Vineyard	40°03'48"N	70°45'54"W	16 Jul 1881	USFC Fish Hawk	922	130
4696	10 unsexed	Martha's Vineyard	40°03'N	70°38'W	22 Aug 1882	USFC Fish Hawk	1109	163
4697	3 males	Martha's Vineyard	40°03'N	69°44'W	11 Aug 1882	USFC Fish Hawk	1091	119
291245	1 female	Martha's Vineyard	40°02'54"N	70°23'40"W	4 Sep 1880	USFC Fish Hawk	871	210
21448	44 males, 8 females, 19 juv	Martha's Vineyard	40°02'36"N	70°22'58"W	4 Sep 1880	USFC Fish Hawk	870	283
5607	7 males, 1 female, 2 ovig females	S of Nantucket Shoals	40°02'00"N	70°27'00"W	25 May 1883	USFC Albatross	2025	437
5888	14 males, 7 females, 3 ovig females	S of Martha's Vineyard	40°02'N	70°57'W	13 Sep 1880	USFC Fish Hawk	873	183
5354	7 males, 5 females, 15 ovig females	Nantucket Shoals	40°01'50"N	70°59'00"W	21 Sep 1883	USFC Albatross	2091	214
5009	1 male, 1 female	SE of Martha's Vineyard	40°01'N	68°54'W	26 Aug 1882	USFC Fish Hawk	1124	1170
8057	4 males, 6 females, 9 ovig females	S of Martha's Vineyard	40°00'45"N	70°54'15"W	2 Aug 1884	USFC Albatross	2185	236
8056	1 ovig female	S of Martha's Vineyard	40°00'15"N	70°55'30"W	2 Aug 1884	USFC Albatross	2184	249

Table 1. Cont.

USNM no.	No. Specimens/Sex	Locality	Latitude	Longitude	Date Collected	Vessel	Station no.	Depth (m)
37979	1 female	Martha's Vineyard	40°00'00"N	71°14'30"W	9 Aug 1881	USFC Fish Hawk	943	287
5885	2 males, 2 ovig females	Martha's Vineyard	40°00'N	69°19'W	14 Sep 1881	USFC Fish Hawk	1027	170
8174	2 males, 2 females	Nantucket Shoals	39°59'30"N	70°30'45"W	22 Aug 1884	USFC Albatross	2212	783
4571	4 males, 5 females, 8 ovig females	Martha's Vineyard	39°59'N	70°06'W	21 Sep 1881	USFC Fish Hawk	1039	238
5353	17 males, 6 females	Nantucket Shoals	39°58'50"N	70°39'04"W	20 Sep 1883	USFC Albatross	2089	307
5586	3 males, 3 females	SW of Nantucket Shoals	39°58'25"N	70°37'00"W	25 May 1883	USFC Albatross	2027	362
10615	30 males, 21 females, 3 ovig females	S of Martha's Vineyard	39°58'20"N	70°52'0"W	7 Aug 1885	USFC Albatross	2540	263
5991	6 males, 2 females	Martha's Vineyard, off Nantucket	39°58'N	70°35'W	4 Oct 1882	USFC Fish Hawk	1152	210
4569	1 female	Martha's Vineyard	39°57'6"N	69°16'W	14 Sep 1881	USFC Fish Hawk	1029	838
5604	5 males	SW of Nantucket Shoals	39°57'50"N	70°32'00"W	25 May 1883	USFC Albatross	2028	382
8055	46 males, 15 females	S of Nantucket Shoals	39°57'45"N	70°56'30"W	2 Aug 1884	USFC Albatross	2183	357
8060	1 male, 1 female, 1 ovig female	S of Nantucket Shoals	39°57'30"N	69°41'10"W	6 Aug 1884	USFC Albatross	2199	143
21449	25+ unsexed	S of Nantucket Shoals	39°57'00"N	70°56'00"W	13 Sep 1880	USFC Fish Hawk	876	219
10612	8 males, 10 females	S of Nantucket Shoals	39°56'45"N	70°50'30"W	7 Aug 1885	USFC Albatross	2537	285
5887	20 males, 14 females	Martha's Vineyard	39°56'30"N	70°59'45"W	2 Oct 1880	USFC Fish Hawk	895	435
8059	1 male	S of Nantucket Shoals	39°56'30"N	69°43'20"W	6 Aug 1884	USFC Albatross	2198	154
5074	1 male, 3 females	Martha's Vineyard	39°56'N	69°45'W	11 Aug 1882	USFC Fish Hawk	1093	638
21453	12 males, 7 females	Martha's Vineyard	39°56'N	69°22'W	14 Sep 1881	USFC Fish Hawk	1032	380
5905	5 males, 4 females, 1 ovig female	Martha's Vineyard	39°55'30"N	71°14'00"W	9 Aug 1881	USFC Fish Hawk	946	452
4989	30 males, 18 females, 6 ovig females	Martha's Vineyard	39°54'N	69°44'W	11 Aug 1882	USFC Fish Hawk	1097-8	289
56446	1 female	Martha's Vineyard	39°54'N	70°37'W	4 Oct 1882	USFC Fish Hawk	1153	411
10929	1 male	S of Nantucket Shoals	39°53'30"N	70°17'30"W	8 Aug 1885	USFC Albatross	2546	984
4695	9 males, 5 females	Martha's Vineyard	39°53'N	69°47'W	11 Aug 1882	USFC Fish Hawk	1096	580
21451	3 males, 3 females	Martha's Vineyard	39°52'40"N	70°58'15"W	2 Oct 1880	USFC Fish Hawk	894	668-680
5916	1 male, 2 females	Martha's Vineyard	39°52'20"N	70°58'0"W	2 Oct 1880	USFC Fish Hawk	893	680
8058	10 males, 2 females	S of Martha's Vineyard	39°5'15"N	70°55'30"W	2 Aug 1884	USFC Albatross	2186	646
21455	4 males, 10 females	SW of Martha's Vineyard	39°50'45"N	71°43'00"W	18 Sep 1885	USFC Albatross	2583	240
5897	12 males, 9 females	Martha's Vineyard	39°50'30"N	71°23'W	8 Sep 1881	USFC Fish Hawk	1026	333
21457	several disintegrated	SW of Nantucket Shoals	39°50'00"N	71°43'00"W	18 Sep 1885	USFC Albatross	2582	251
16913	83 unsexed in zoanthids	SW of Nantucket Shoals	39°50'00"N	71°43'00"W	18 Sep 1885	USFC Albatross	2582, 2583	251
5898	17 males, 9 females	Martha's Vineyard	39°48'30"N	70°54'00"W	13 Sep 1880	USFC Fish Hawk	880	462
10624	18 males, 7 females, 7 ovig females	SW of Nantucket Shoals	39°48'10"N	71°48'40"W	10 Aug 1885	USFC Albatross	2560	208
5919	3 males, 1 female	Martha's Vineyard	39°45'13"N	71°30'W	8 Sep 1881	USFC Fish Hawk	999	486

Table 1. Cont.

USNM no.	No. Specimens/Sex	Locality	Latitude	Longitude	Date Collected	Vessel	Station no.	Depth (m)
4573	8 males, 4 females	Martha's Vineyard	39°42'N	71°32'W	8 Sep 1881	USFC Fish Hawk	997	613
39948	8 males, 2 females	Martha's Vineyard	39°42'N	71°32'W	8 Sep 1881	USFC Fish Hawk	997	613
5075	1 female	Martha's Vineyard	39°32'N	72°00'W	8 Sep 1882	USFC Fish Hawk	1142	589
56448	7 males, 4 females	Vineyard Sound				USFC Albatross	2582	
10614	18 males, 7 females, 7 ovig females	off Martha's Vineyard			1885	USFC Albatross	2560	208
68969	2 males, 1 female, 1 ovig female	off Martha's Vineyard						
42143	1 male	Gulf Stream, S of Martha's Vineyard						
Rhode Island								
21450	18 males, 2 females, 9 ovig females	off Block Island	41°11'30"N	71°34'30"W	1880	USFC		
34071	1 male, 1 female	off New Port	39°56'30"N	70°59'45"W	2 Oct 1880	USFC Fish Hawk	895	435
34121	1 male	off New Port	39°52'20"N	70°58'0"W	2 Oct 1880	USFC Fish Hawk	893	680
New Jersey								
5416	1 male	Hudson Canyon	39°58'35"N	71°00'30"W	21 Sep 1883	USFC Albatross	2092	360
5588	1 female	Hudson Canyon	39°29'00"N	72°19'55"W	26 May 1883	USFC Albatross	2031	135
5603	1 disintegrated	Hudson Canyon	39°29'00"N	72°19'40"W	26 May 1883	USFC Albatross	2032	135
7942	3 males	Hudson Canyon	39°29'00"N	72°05'15"W	22 Jul 1884	USFC Albatross	2178	419
213034	1 ovig female	Baltimore Canyon	39°10'06"N	73°52'12"W	2 Aug 1981	Johnson Sea Link	JSL-1084-3	225
7275	1 female	Hudson canyon	39°02'40"N	72°40'00"W	20 Sep 1885		2586-7	600
21456	16 males, 9 females, 26 ovig females	Hudson Canyon	38°53'30"N	72°52'0"W	21 Sep 1885	USFC Albatross	2591	344
185617	2 males	off New Jersey	38°50'00"N	72°55'00"W	12 Sep 1977		CABP J1	400
185618	1 female	off New Jersey	38°50'00"N	72°55'00"W	12 Sep 1977		CABP J1	400
185619	1 male, 1 female, 1 ovig female	off New Jersey	38°50'00"N	72°55'00"W	12 Sep 1977		CABP J1	400
185612	1 male, 2 ovig females	off New Jersey	38°45'00"N	73°01'00"W	25 Aug 1976		CABP J1	400
185613	1 female	off New Jersey	38°45'00"N	73°01'00"W	25 Aug 1976		CABP J1	400
185609	1 juv	off New Jersey	38°45'00"N	73°00'48"W	20 Mar 1976		CABP J1	360-410
185610	1 female	off New Jersey	38°45'0"N	73°00'48"W	20 Mar 1976		CABP J1	360-410
185611	1 male	off New Jersey	38°44'12"N	73°00'54"W	20 Jun 1976		CABP J1	315-400
185614	2 males	off New Jersey	38°44'00"N	73°00'00"W	14 Nov 1976		CABP J1	375
185615	1 male	off New Jersey	38°44'00"N	73°00'00"W	14 Nov 1976		CABP J1	375
185616	2 males, 1 female	off New Jersey	38°44'00"N	73°00'00"W	14 Nov 1976		CABP J1	375
185620	2 males, 1 female	off New Jersey	38°43'00"N	73°01'00"W	22 Mar 1977		CABP J1	490
4929	Paratypes: 3 males, 2 females	Cape May	38°21'50"N	73°32'00"W	18 Jul 1880	USCS Blake	336	360

Table 1. Cont.

USNM no.	No. Specimens/Sex	Locality	Latitude	Longitude	Date Collected	Vessel	Station no.	Depth (m)
Delaware								
12747	1 female	offshore of Delaware Bay	38°42'00"N	73°05'30"W	18 Sep 1887	USFC Albatross	2745	410
185608	1 male	off Delaware	38°40'48"N	73°04'18"W	30 Oct 1975	R/V Columbus Iselin	MMS-CABP/01W-J1	342
8617	1 male, 2 females		38°37'30"N	73°11'00"W	12 Sep 1884	USFC Albatross	2232	444
4823	8 males	SE of Delaware	38°35'N	73°13'W	10 Oct 1881	USFC Fish Hawk	1045	570
4572	2 males, 1 ovig female	off the cape S of Delaware	38°33'N	73°18'W	10 Oct 1881	USFC Fish Hawk		190
4834	5 males	off the cape S of Delaware	38°31'N	73°21'W	10 Oct 1881	USFC Fish Hawk	1047	285
4568	1 female	off the cape S of Delaware	38°28'N	73°22'W	10 Oct 1881	USFC Fish Hawk	1049	795
213033	1 female	Baltimore Canyon	38°08'30"N	73°49'54"W	2 May 1979		E-2A-79-9	280-570
Virginia								
7939	1 male, 6 ovig females	Chincoteague	37°57'0"N	73°53'30"W	20 Jul 1884	USFC Albatross	2170	283
5908	3 males, 1 female		37°36'00"N	74°15'00"W	21 May 1883	USFC Albatross	2021	327
5563	1 male	Virginia Beach	37°31'00"N	74°53'30"W	5 May 1883	USFC Albatross	2015	35
4835	6 males, 1 female, 1 ovig female	off mouth of Chesapeake Bay	37°25'00"N	74°18'00"W	16 Nov 1880	USFC Fish Hawk	897	288
4839	10 males, 6 females	off mouth of Chesapeake Bay	37°24'N	74°17'W	16 Nov 1880	USFC Fish Hawk	898	549
4837	16 unsexed	off mouth of Chesapeake Bay	37°24'N	74°17'00"W	16 Nov 1880	USFC Fish Hawk	898	549
5523	5 males, 2 females	Cape Hatteras	37°19'45"N	74°26'6"W	23 Mar 1883	USFC Albatross	2004	187
5534	4 males, 1 ovig female	Cape Hatteras	37°18'11"N	74°27'36"W	23 Mar 1883	USFC Albatross	2005	150
5522	2 males, 3 females	Cape Hatteras	37°16'30"N	74°20'36"W	23 Mar 1883	USFC Albatross	2003	1172
10099	11 males, 5 females, 1 ovig female	Norfolk	37°10'15"N	74°32'00"W	3 Jun 1885	USFC Albatross	2423	262
1293226	1 female	Norfolk	37°10'15"N	74°32'00"W	3 Jun 1885	USFC Albatross	2423	262
10093	6 males, 4 females, 2 ovig females	Norfolk	37°08'30"N	74°33'30"W	3 Jun 1885	USFC Albatross	2422	155
8754	19 males, 6 females, 5 ovig females	Norfolk	37°07'50"N	74°34'20"W	18 Oct 1884	USFC Albatross	2264	305
77423	2 males	Norfolk	37°07'40"N	74°35'40"W	18 Oct 1884	USFC Albatross	2265	128
10086	7 males, 6 females	Norfolk	37°07'00"N	74°34'30"W	3 Jun 1885	USFC Albatross	2421	117
9869	7 males, 13 females, 2 ovig females	Norfolk	37°03'20"N	74°31'40"W	5 Apr 1885	USFC Albatross	2420	190
5605	4 males, 1 ovig female	Virginia Beach	36°41'05"N	74°38'55"W	1 May 1883	USFC Albatross	2014	682
10104	3 males, 1 female	Norfolk	36°41'37"N	74°42'15"W	4 Jun 1885	USFC Albatross	2424	155
5591	1 female, 1 ovig female	Virginia Beach	36°38'30"N	74°40'10"W	30 Apr 1883	USFC Albatross	2011	148
North Carolina								
154435	1 male	off North Carolina	36°36'45"N	74°21'3"W	22 Jul 1975	R/V Eastward	4	375-560
10109	5 males, 2 females	NE of Nags Head	36°20'24"N	74°46'30"W	4 Jun 1885	USFC Albatross	2425	218
10118	5 males, 1 female, 7 ovig females	Nags Head	36°01'30"N	74°47'30"W	4 Jun 1885	USFC Albatross	2426	170

Table 1. Cont.

USNM no.	No. Specimens/Sex	Locality	Latitude	Longitude	Date Collected	Vessel	Station no.	Depth (m)
8887	2 males, 1 female, 1 ovig female	Cape Hatteras	35°40'00"N	74°51'30"W	20 Oct 1884	USFC Albatross	2299	541
122724	1 male	Beaufort Shelf	34°16'57"N	75°48'36"W	4 Jan 1967	R/V Eastward	6567	475-457
9448	4 males, 4 females, 1 ovig female	continental shelf between Cape Hatteras and Cape Fear	32°43'12"N	77°01'48"W	19 Nov 1983	R/V Hatteras	831119.3	583
South Carolina								
11272	2 males, 3 females, 1 ovig female	E of Charleston	32°36'00"N	77°29'15"W	21 Oct 1885	USFC Albatross	2624	472
11275	1 male	E of Charleston	32°35'00"N	77°30'00"W	21 Oct 1885	USFC Albatross	2625	452
11509	1 male, 2 females	Charleston	32°32'30"N	77°15'00"W	6 May 1886	USFC Albatross	2675	598
14022	2 males	E of Charleston	32°27'30"N	77°20'30"W	21 Oct 1885	USFC Albatross	2626	646
Florida - East Coast								
103388	5 males, 1 female	off Jacksonville	30°04'N	80°10'W	24 Nov 1957	R/V Silver Bay	228	347
103386	1 male, 1 ovig female	off Cape Canaveral	29°59'N	80°07'W	20 Nov 1957	R/V Silver Bay	212	366
103376	4 males, 3 females, 2 ovig females	between Saint Augustine and Cape Canaveral	29°48'N	80°12'W	1 Sep 1956	R/V Combat	82	238
103378	21 males, 9 females	between Saint Augustine and Cape Canaveral	29°48'N	80°12'W	1 Sep 1956	R/V Combat	82	238
103380	2 males, 1 female	off Cape Canaveral	29°43'N	80°09'W	21 Nov 1957	R/V Silver Bay	216	366
186440	2 males	off Cape Canaveral	29°41'N	80°11'W	23 Feb 1977	R/V Dolphin	MARMAP 577082	260
103381	2 males, 1 female, 1 ovig female	off Cape Canaveral	29°41'N	80°08'W	21 Nov 1957	R/V Silver Bay	217	329-366
103382	3 males	off Cape Canaveral	29°38'N	80°11'W	21 Nov 1957	R/V Silver Bay	218	402
174049	4 males, 1 female	off Florida	29°36'50"N	80°11'12"W	3 Mar 1977	R/V G.W. Pierce II	MMS-SABP/0295-1	226
174050	4 males, 1 female	off Florida	29°36'25"N	80°11'9"W	3 Sep 1977	R/V G.W. Pierce II	MMS-SABP/0904-1	151
174054	3 males, 6 females, 2 ovig females	off Florida	29°36'02"N	80°11'02"W	27 Nov 1977	R/V G.W. Pierce II	MMS-SABP/1316-1	185-225
174369	1 male, 1 female, 1 ovig female	off Florida	29°36'19"N	80°11'12"W	20 May 1977	R/V G.W. Pierce II	MMS-SABP/0566-1	256
103379	5 males	off Cape Canaveral	29°34'N	80°23'W	2 Jun 1957	R/V Combat	349	46
103383	2 males, 1 female, 1 ovig female	off Cape Canaveral	29°34'N	80°09'W	21 Nov 1957	R/V Silver Bay	219	347
103387	4 males, 1 female	40 miles E of Daytona Beach	29°27'N	80°13'W	24 Nov 1957	R/V Silver Bay	225	329
103384	1 ovig female	off Cape Canaveral	29°21'N	80°06'W	22 Nov 1957	R/V Silver Bay	221	329-347
103385	2 females, 2 ovig females	50 miles E of Daytona Beach	29°14'N	80°05'W	23 Nov 1957	R/V Silver Bay	223	247
102799	1 ovig female	off Florida	28°56'N	80°01'5"W	29 Mar 1940	R/V Pelican	204-4	183
241344	1 female	off Cape Canaveral	28°23'N	79°56'W	01 Feb 1961	R/V Silver Bay	2725	172
102797	1 female	off Florida	28°08'N	79°54'W	30 Mar 1940	R/V Pelican	205-5	183
169985	1 male	off Cape Canaveral	27°56'30"N	79°52'48"W	18 Sep 1974	R/V Gosnold	739	200
99475	1 male	off Florida	26°18'N	79°51'W	29 Mar 1956	R/V Pelican	17	366

Table 1. Cont.

USNM no.	No. Specimens/Sex	Locality	Latitude	Longitude	Date Collected	Vessel	Station no.	Depth (m)
1558415	2 females	off Miami	25°48'34"N	79°59'28"W	2006	R/V Suncoaster		250
1011228	1 female	Gulf Stream			6 Aug 1947			146
1106037	1 male, 1 female	off Florida			12 May 2005		6	200
Bahamas								
1106057	1 male	N of Bimini	25°43'58"N	79°19'25"W	13 May 2005	Johnson Sea Link II	8	300
Gulf of Mexico - Florida								
1543620	1 male	SW of Dry Tortugas	24°30'29"N	83°33'38"W	17 Oct 2004			
1549132	1 male	off Dry Tortugas	24°28'59"N	83°30'41"W	11 Sep 2014	R/V Pelican	ULL/DL Felder/ GoMRI-V-24	353-355
265304	1 male, 1 female	Florida Keys, SW of Dry Tortugas	24°24'N	83°15'W	18 Jun 1956	R/V Oregon	1552	119
65717	2 males, 4 ovig females	off Key West	24°17'5"N	81°58'25"W	14 Feb 1902	USFC Fish Hawk	7280	179
69727	2 males, 1 female	Florida Keys, Dry Tortugas			1934			
102683	1 male	Florida Keys, Dry Tortugas			1 Aug 1932		CLTE 66-32	234-256
102682	1 male	Florida Keys, Dry Tortugas, 15 miles S of No. 2 Red Buoy			15 Jul 1930		CLTE 14-30	201
102684	1 male, 1 ovig female	Florida Keys, Dry Tortugas, 17 miles S of No. 2 Red Buoy			2 Jul 1932		CLTE 30-32	247-285
102798	1 female	Florida Keys, Knight's Key, N of channel			22 Jan 1903	USFC Fish Hawk	CLTE 7412	4

TAXONOMIC ACCOUNT

Superfamily Paguroidea Latreille, 1802

Family Paguridae Latreille, 1802

Genus *Pagurus* Fabricius, 1775

Pagurus politus (Smith, 1882)

(Figs. 1–4A, B)

Eupagurus sp. — Smith, 1881: 428. — Smith, 1882: 14.

Eupagurus politus Smith, 1882: 12, pl. 2, fig. 5 (type locality: USFC Fish Hawk, sta 922, Martha's Vineyard, Massachusetts, northeastern coast of United States). — Smith, 1883: 27, pl. 4, fig. 4. — Verrill, 1883: 61; 1885: 553. — Smith, 1887: 639. — Howe, 1901: 240. — Alcock, 1905: 182. — Przibram, 1905: 197. — Pilsbry, 1907: 85. — Fowler, 1912: 579. — Balss, 1924: 768, tab. 1.

Eupagurus Smithii A. Milne-Edwards and Bouvier, 1893: 140, pl. 10, figs 1–12 (preoccupied name) (type locality: Sand Key, Florida, Gulf of Mexico).

Eupagurus bouvieri Faxon, 1895: 57 (replacement name for *Eupagurus smithii* A. Milne Edwards, 1893).

?*Pagurus politus* — Sumner et al., 1913: 668.

Pagurus politus — Rathbun, 1905: 16. — Gordan, 1956: 333. — Hazlett, 1966: 85. — Williams, 1974: 21 (key) fig 56. — Williams, 1984: 219, fig. 156. — Williams, 1988: 69; Williams and Wigley, 1977: 9. — Abele and Kim, 1986: 33, 379, unnumbered fig. f–h. — Williams et al., 1989: 31. — Squires, 1990: 365 (key), 381, figs 202, 203. — Nizinski, 2003: 121. — Felder et al., 2009: 1071. — Martínez-Campos et al., 2017: 358, fig 6.71.

Pagurus bouvieri — Williams et al., 1989: 31. — McLaughlin et al., 2005: 244. — McLaughlin et al., 2010: 32.

Type material. Lectotype herein selected of *Eupagurus politus* Smith, 1882, male 9.8 mm, northwestern Atlantic, Martha's Vineyard, Massachusetts, USFC Fish Hawk, sta 922, 40°03'48"N 70°45'54"W, 16 July 1881, 130 m (USNM 21452).

Paratypes of *Eupagurus smithii* A. Milne Edwards, 1893 (preoccupied name, = *Eupagurus bouvieri* Faxon, 1895), 2 ovig females 6.6 mm, 7.7 mm (Fig. 4), "Bache"

Expedition, Gulf of Mexico, Sand Key, Florida, 234 m, 23 March 1872 (MCZ 4005).

Paralectotypes of *Eupagurus politus* Smith, 1882: 3 males 4.1–4.8 mm, 2 females 4.6, 5.2 mm, northwestern Atlantic, Cape May, New Jersey, USCS Blake, sta 336, 38°21'50"N 73°32'W, 18 Jul 1880, 360 m (USNM 4929); and specimens listed by Smith (1882: 13, 14) from USFC stations 197, 260, 304, 306, 309, 310 (not found in USNM or MCZ, see Remarks).

Additional material. See Tab. 1.

Redescription. Eleven pairs of undivided phyllobranch gills. Shield (Fig. 1) slightly broader than long; dorsal surface smooth except for longitudinal row of 3 tufts of short setae on each side of midline, with distinct short slit parallel to each anterior dorsolateral margin and short line-d on each side; rostrum bluntly triangular, with pair of tufts of setae dorsally; lateral projections each armed with strong spine distally.

Ocular peduncles (Figs. 1A, 4) stout, approximately 0.7 times (including cornea) as long as shield; corneas dilated; ocular acicles with strong sub-marginal spine, dorsodistal surface concave.

Antennular peduncle (Fig. 1A) exceeding cornea by approximately 1.5 times length of ultimate segment, nearly naked.

Antennal peduncle (Fig. 1A) slightly exceeding distal margin of cornea; fifth and fourth segments unarmed; third segment with strong ventrodorsal spine; second segment with dorsolateral distal angle strongly produced forming strong spine reaching to distal margin of fourth segment, mesial margin armed with 3 or 4 spines in addition to terminal spine, dorsomesial distal angle with small spine; first segment with small spine on laterodorsal margin; acicle slightly exceeding distal margin of cornea, sinuous (in dorsal view), terminating in acute spine, mesial margin with tufts of setae; flagellum naked, reaching to tips of fingers of right chela.

Chelipeds (Figs. 2, 4) markedly dissimilar in strength and length, left when fully extended reaching to proximal margin of dactyl of right cheliped. Right cheliped (Fig. 2B) with dactyl, fixed finger and palm armed dorsally with numerous mostly bluntly spiniform tubercles arranged in irregular rows; cutting

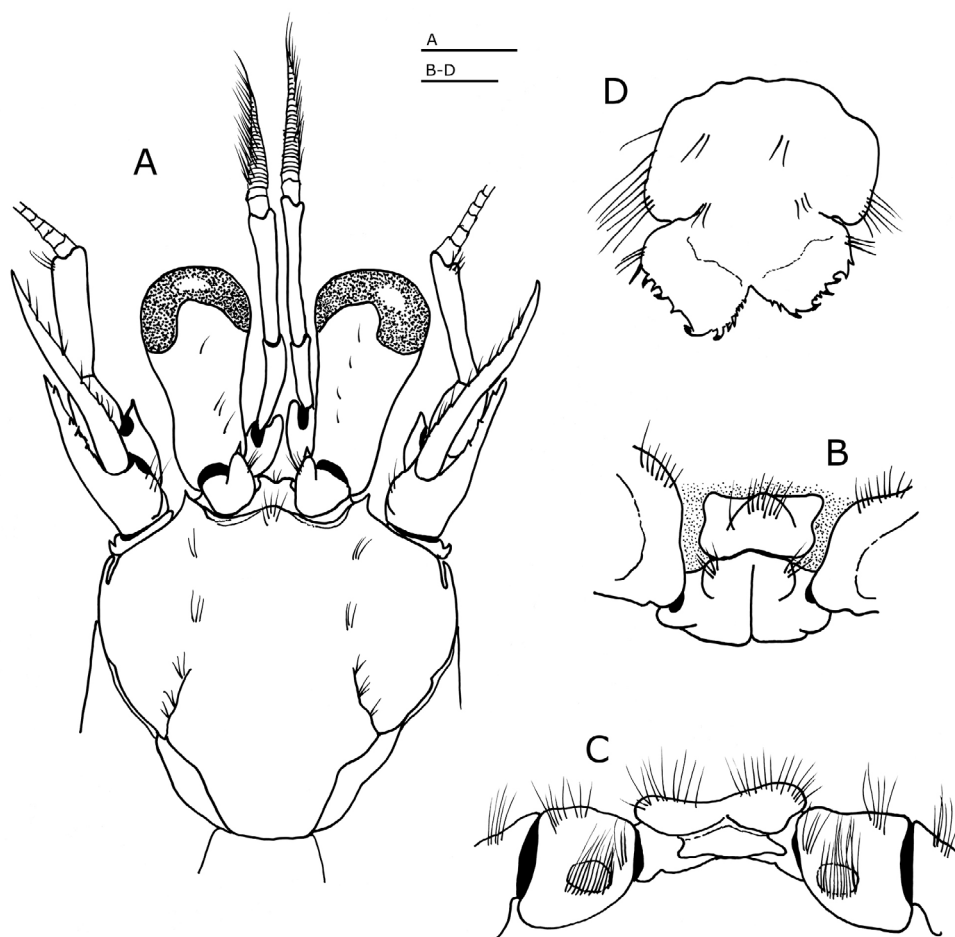


Figure 1. *Pagurus politus* (Smith, 1882), male lectotype 7.9 mm, USFC Albatross, sta 2823, northwestern Atlantic, Martha's Vineyard, Massachusetts (USNM 16716): **A**, shield and cephalic appendages, dorsal view; **B**, anterior and posterior lobes of sternite XI (between third pair of pereopods), ventral view; **C**, sternite XIII (between fifth pair of pereopods), ventral view; **D**, telson, dorsal view. Scales = 3 mm (A), and 2 mm (B–D).

edges of dactyl and fixed finger each consisting of row of dissimilar rounded calcareous teeth and row of tufts of setae on dorsomesial and ventromesial margins; palm with lateral and mesial margins rounded; carpus with dorsomesial margin well defined by row of strong spiniform tubercles.

Left chela (Fig. 2A) with dactyl more than 2 times as long as palm (measured on mesial margin). Dactyl surfaces lacking spines except proximally on mesial margin, with well-spaced tufts of short setae; cutting edge with row of fused minute corneous teeth. Palm and fixed finger with numerous mostly blunt spiniform tubercles, dorsal surface of palm somewhat longitudinally raised on midline; cutting edge of fixed finger with row of fused minute corneous teeth in

between small sharp calcareous teeth. Carpus dorsal surface smooth and delimited by dorsolateral and dorsomesial row of strong spiniform tubercles.

Pereopods 2 and 3 (Figs. 3A–D, 4) similar left from right. Dactyl broadly curved, approximately 1.7 times as long as propodus, terminating in sharp corneous claw, with longitudinal crease on proximal half of lateral and mesial surfaces, ventromesial margin armed with 25–35 small corneous spinules on distal two-thirds. Propodus with dorsal margin (of pereopods 2 and 3) and dorsolateral surface (of pereopod 2) armed with small blunt or sharp tubercles. Carpus with dorsal margin armed with spiniform tubercles or spines and strong dorsodistal spine. Sternite XI (pereopods 3) with anterior lobe semicircular, distally setose (Fig. 1B).

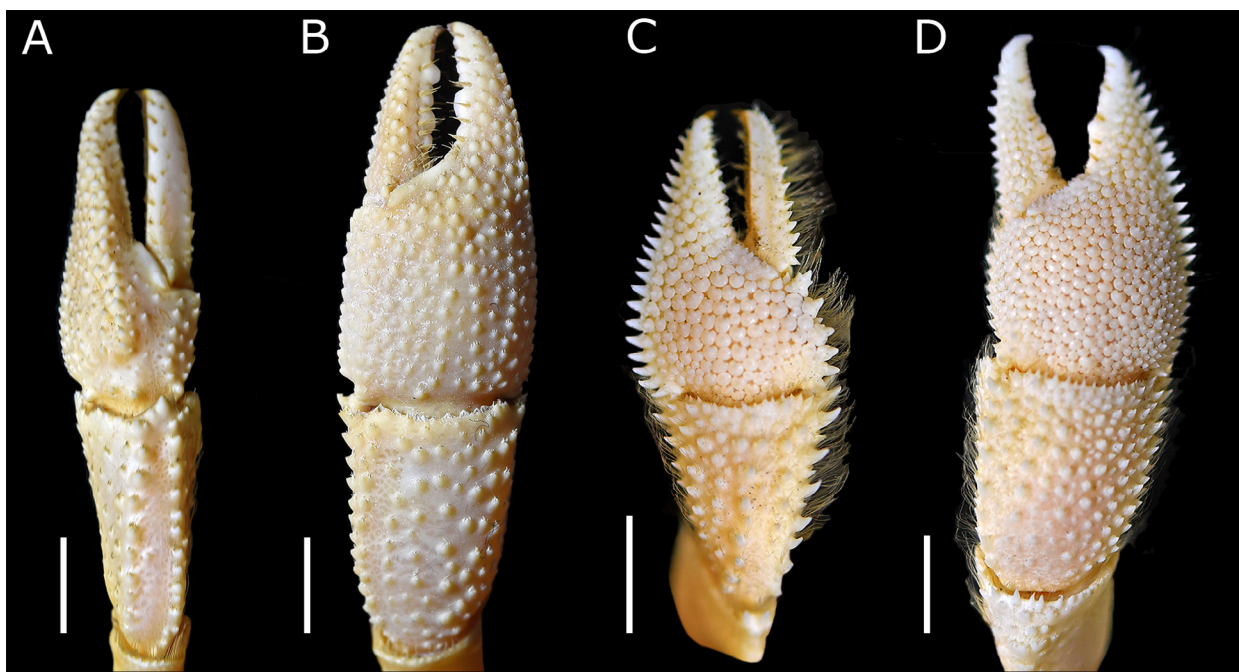


Figure 2. Carpus and chela of chelipeds, dorsal view. *Pagurus politus* (Smith, 1882), male lectotype 7.9 mm, USFC Albatross, sta 2823, northwestern Atlantic, Martha's Vineyard, Massachusetts (USNM 16716): **A**, left; **B**, right. *Pagurus smithi* (Benedict, 1892), male lectotype 7.9 mm, USFC Albatross, sta 2823, northeastern Pacific, southern part of Gulf of California, Mexico (USNM 16716): **C**, left; **D**, right. Scales = 1 mm.

Pereopod 4 (Fig. 3E) dactyl lacking preungual process. Propodal rasp consisting of 3 or 4 rows of ovate corneous scales.

Pereopod 5 chelate. Propodal rasp consisting of minute corneous scales occupying nearly half of lateral surface. Sternite XIII (pereopod 5) subdivided anteriorly into 2 setose lobes.

Uropods strongly asymmetrical, left stronger and larger. Telson (Fig. 1D) weakly asymmetrical, with distinct lateral indentation; posterior lobes separated by U-shaped cleft, terminal margins rounded, armed with straight or curved corneous-tipped spines (stronger on left lobe).

Male with paired gonopores (Fig. 1C) surrounded and covered by forwardly directed bristle-like setae; with unpaired left pleopods 2–5; females with paired gonopores, and unpaired left pleopods 2–5 (2–4 carrying eggs).

Distribution. Western Atlantic: eastern coast of the United States from Georges Bank, off Massachusetts, to Florida Straits; north of Bimini, Bahamas; Gulf of Mexico, from Florida Keys and Dry Tortugas; and Caribbean coast of Colombia. Depth: 30 to 1172 m,

most frequently found on continental shelf (200 m or less).

Habitat. Occupies medium-sized gastropod shells.

Remarks. A holotype was not selected by Smith (1882). The lectotype herein selected is the male figured by Smith (1882) in his plate 2, figure 5.

A. Milne-Edwards and Bouvier (1893: 143) indicated in the description of their *Eupagurus Smithii* that an ovigerous female from Sand Key collected in 125 fathoms (229 m) was used as “type” for their taxon, and thus that specimen must be considered the holotype. As previously mentioned, Faxon (1895) discovered that A. Milne-Edwards and Bouvier’s taxon was a preoccupied name and renamed it as *Pagurus bouvieri*, a name herein shown to be a junior synonym of *P. politus*. The lot containing the type used by A. Milne-Edwards and Bouvier has not been found in the MCZ. A second lot (MCZ 4005) used by them, also from Sand Key but from a slightly deeper depth (128 fathoms or 234 m), was examined and found to contain now only two ovigerous female paratypes instead of the three indicated by A. Milne-Edwards and Bouvier (1893).

Despite being a commonly encountered species throughout its range, *P. politus* has rarely been discussed in pagurid taxonomic works. Numerous, unreported specimens are deposited in the USNM (Tab. 1). Earlier morphological information on this species provided by Smith (1882) and A. Milne-Edwards and Bouvier (1893, as the preoccupied *Eupagurus Smithii*)

were brief and the illustrations sketchy. Since then, most references to *P. politus* have been repetitions of previous records or in works dealing with behavioral or symbiotic aspects (e.g., Howe, 1901; Fowler, 1912; Pilsbry, 1907; Verrill, 1885; Hazlett, 1966; Abele and Kim, 1986; Nizinski, 2003; McLaughlin et al., 2005; McLaughlin et al., 2010).

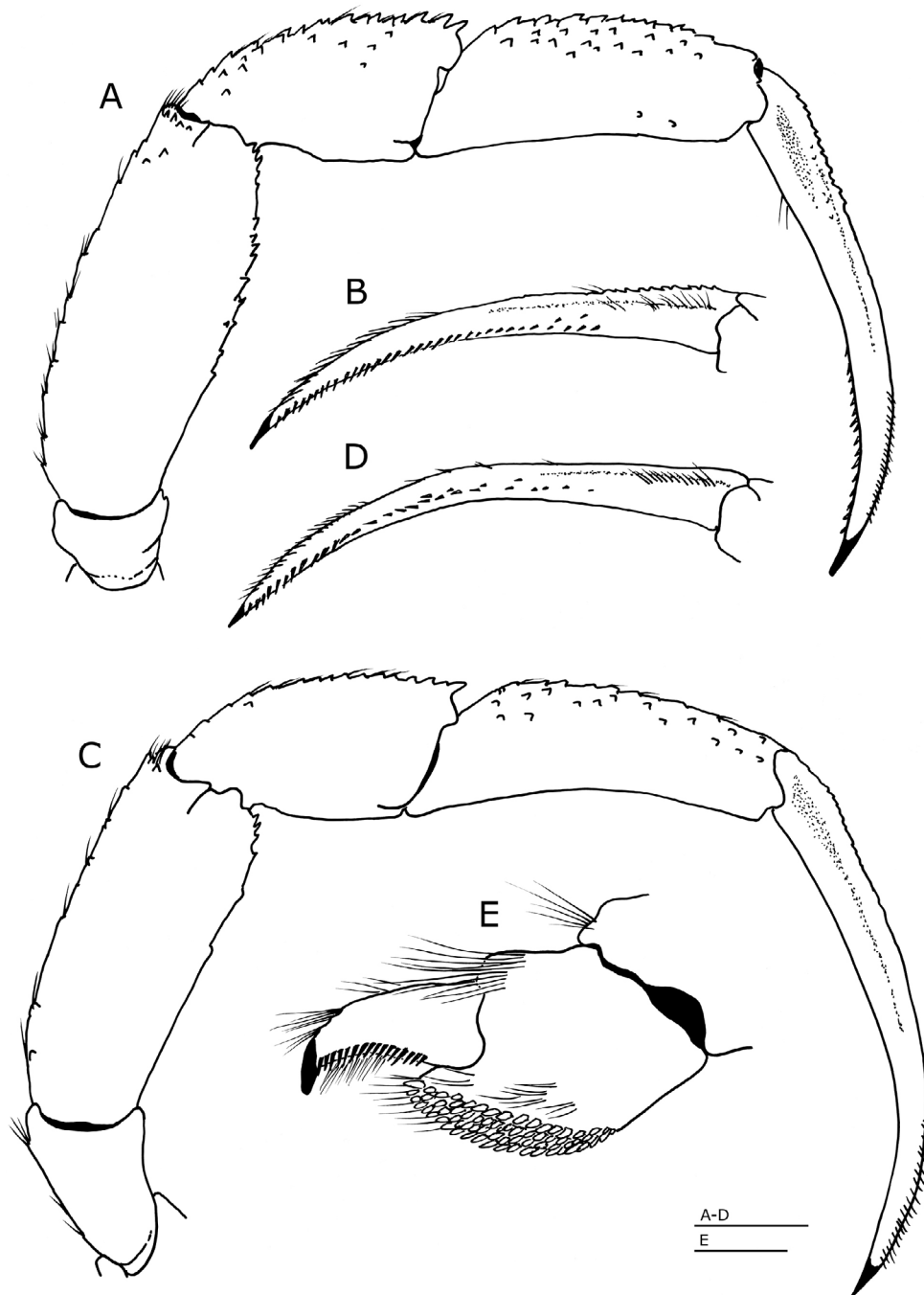


Figure 3. *Pagurus politus* (Smith, 1882), male lectotype 7.9 mm, USFC Albatross, sta 2823, northwestern Atlantic, Martha's Vineyard, Massachusetts (USNM 16716): **A**, right second pereopod, lateral view; **B**, dactyl of same, mesial view; **C**, right third pereopod, lateral view; **D**, dactyl of same, mesial view; **E**, propodus and dactyl of left fourth pereopod, lateral view. Scales equal 5 mm (A–D) and 1 mm (E).

***Pagurus smithi* (Benedict, 1892)**

(Figs. 4C, D, 5, 6)

Eupagurus smithi Benedict, 1892: 4 (type locality: USFC Albatross, sta 2823, Gulf of California, eastern Pacific).

Pagurus smithi — Glassell, 1937: 259 (new combination). — Haig et al., 1970: 19. — Hendrickx, 1993: 283, 309 (list). — Hendrickx and Harvey, 1999: 372.

Not *Eupagurus Smithii* A. Milne-Edwards and Bouvier, 1893: 140, pl. 10, figs 1–12 (preoccupied name) [= *Pagurus bouvieri* (Faxon, 1895) = *P. politus* (Smith, 1882)].

Type material. Lectotype, herein selected: male 7.9 mm, northeastern Pacific, south part of Gulf of California, Mexico, USFC Albatross, sta 2823, 24°18'00"N 110°22'00"W, 48.5 m, 30 April 1888 (USNM 16716). Paralectotypes: Northeastern Pacific, USFC Albatross: 4 males 6.1–7.6 mm, same station data as lectotype (USNM 108258); 6 males 3.0–6.0 mm, 4 females 3.3–5.1 mm, 1 ovig female 3.9 mm, sta 3014, Gulf of California, S of Tiburón Island, Sonora, Mexico, 28°28'00"N 112°04'30"W, 53 m, 23 March 1889 (USNM 16717); 1 male 6.0 mm, Gulf of California, N of Punta Estrella, Baja California, Mexico, sta 3030, 31°07'00"N 114°29'00"W, 37 m, 27 March 1889 (USNM 16718); 3 males 4.5–8.2 mm, 1 female 5.5 mm, Gulf of California, Baja California, Mexico, sta 3031, N of Punta Estrella, 31°06'45"N 114°28'15"W, 60 m, 27 Mar 1889 (USNM 16719); 4 females 3.1–4.3 mm, Baja California, Santa Margarita Island, Mexico, sta 3038, 24°30'N 111°53'00"W, 57 m, 8 April 1889 (USNM 16720); 1 male 7.5 mm, Baja California, Magdalena Bay, Mexico, sta 3042, 24°38'00"N 112°05'30"W, 31 m, 9 April 1889 (USNM 16721).

Non type material. Northeastern Pacific: 1 female 3.0 mm, Cerros Island, Baja California, Mexico, [28°12'N 115°15'W], haul 1631, 32.9 m, 9 January 1908, coll. Marine Biological Association of San Diego (USNM 1293191); 2 females 3.0, 6.4 mm, Santa Maria Bay, off Hughes Point, Baja California, Mexico, [24°46'01"N 112°16'59"W], 55–73 m, 7 Mar 1934 (USNM 1021120); 5 males 5.1–7.5 mm, 1 ovig female

6.0 mm, Santa Maria Bay, Baja California, Mexico, 27°24'22"N 112°17'52"W, 18–37 m, 20 January 1938, coll. S.A. Glassell (USNM 1293197).

Redescription. Shield (Fig. 5A) slightly broader than long; anterolateral margins sloping; with distinct slit parallel to each anterior dorsolateral margin; anterior margin between rostrum and lateral projections concave; posterior margin truncate; dorsal surface smooth, nearly naked except for short tufts of setae, with short line-d on each side. Rostrum obtusely triangular, without terminal spine, slightly bulging dorsally; lateral projections triangular, with small terminal spine; branchiostegites and posterior carapace membranous except for weakly calcified postero-median plate, glabrous except for finely setose anterior margins of branchiostegites.

Ocular peduncles (Fig. 5A) stout, approximately 0.7 times (including cornea) as long as shield, slightly constricted medially, glabrous; corneas dilated. Ocular acicles subtriangular, with sub-marginal spine, separated basally by approximately half basal width of 1 acicle, dorsal surface of distal portion concave.

Antennular peduncle (Fig. 5A) slender, exceeding distal margin of ocular peduncle (including cornea) by approximately 0.2 times length of ultimate segment. Ultimate and penultimate segments glabrous. Basal segment (Fig. 5B) lateral face with subrectangular distal lobe; proximal lobe bearing fringe of long bristle-like setae and terminating in strong spine.

Antennal peduncle (Fig. 5A) exceeding distal margin of ocular peduncle (including cornea) by approximately 0.5 times length of fifth segment. Fifth segment unarmed or with scattered setae. Fourth segment unarmed. Third segment with small ventrodistal spine. Second segment with dorsolateral distal angle strongly produced forming strong spine (reaching to approximately 0.75 times length of fourth segment) with finely denticulate mesial margin; dorsomesial distal angle with small sharp spine, with short setae on mesial surface. First segment with small spine on laterodistal margin. Antennal acicle reaching to approximately distal margin of cornea, curving outwardly, terminating in acute spine, mesial margin with tufts of setae. Flagellum reaching to approximately mid-length of right chela, naked.

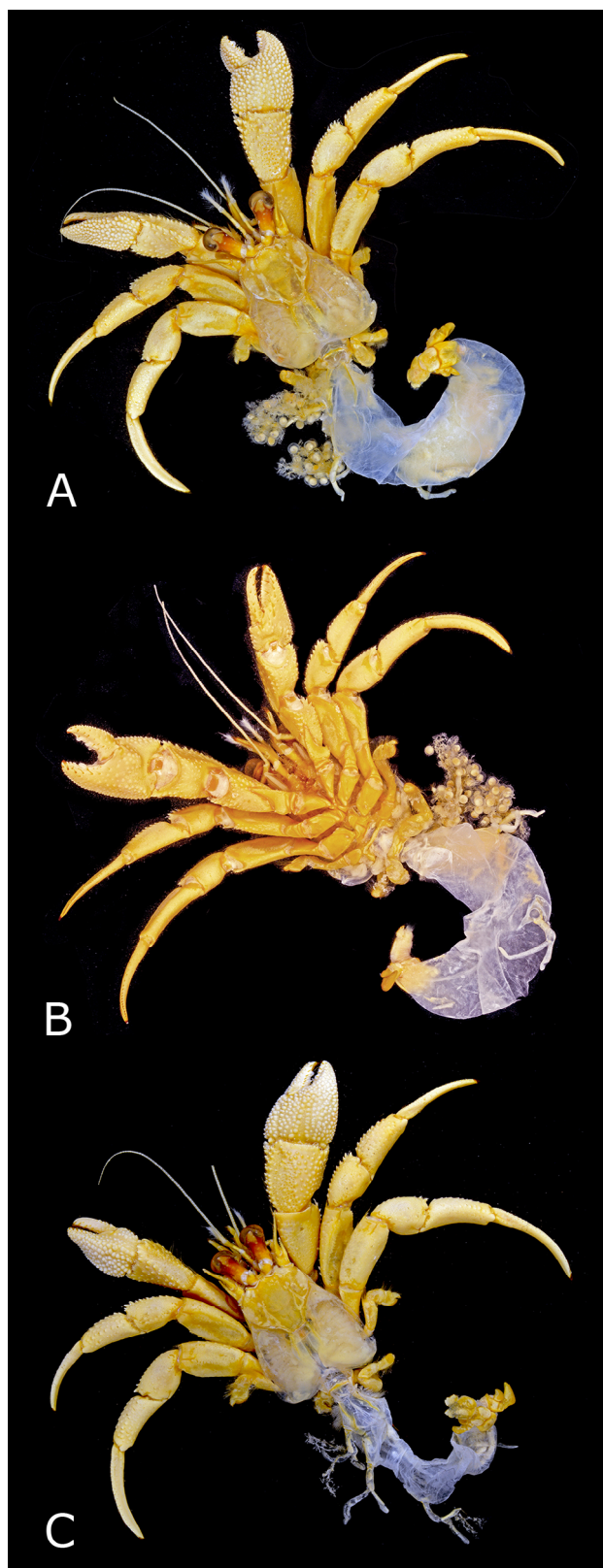


Figure 4. Paratypes of *Eupagurus smithii* A. Milne-Edwards and Bouvier, 1893 (preoccupied name, = *Eupagurus bouvieri* Faxon, 1895): **A, B**, ovigerous females 6.6 mm (**A**, dorsal view; **B**, ventral view); **C**, ovigerous female 7.7 mm (dorsal view), “Bache” Expedition, Gulf of Mexico, Sand Key, Florida (MCZ 4005). Photos: D.L. Felder.

Chelipeds (Fig. 2C, D) distinctly unequal, right longer and broader, general shape subovate. Right chela somewhat dorsoventrally flattened, with dorsal surfaces densely covered with honeycomb pattern of flat-topped mushroom-like tubercles each with small spine (Fig. 5C) almost entirely covering surface beneath; ventral surfaces with numerous small, low tubercles; dactyl and fixed finger of each chela with strongly curved corneous tips crossed when closed.

Right chela (Fig. 2D) with dactyl approximately 1.4 times as long as palm (measured along mesial margin), nearly glabrous; dactyl with mesial margin armed with row of strong spines, cutting edge consisting of irregular-sized calcareous teeth and row of tufts of setae on dorsomesial and ventromesial margins. Fixed finger with armature similar to dactyl. Palm dorsal surface convex, lateral margin well delimited by row of strong arrowhead-like spines increasing in size distally and continuing on fixed finger; dorsomesial margin rounded, mesial surface armature similar to dorsal surface. Carpus with dorsal, lateral and mesial surfaces sparsely setose, covered with numerous spines, dorsolateral margin with row of strong spines; dorsodistal margin spinulose. Merus subtriangular in cross section; lateral and mesial faces fairly smooth; with ventrolateral and ventromesial margins having well-spaced small low tubercles. Ischium with small low tubercles on ventral surface. Coxa with small blunt spines on ventrodistal margin, and row of setae on ventromesial margin.

Left cheliped (Fig. 2C) general shape subovate, somewhat dorsoventrally flattened. Chela dorsal surface armed on dorsal and ventral surfaces similarly to right chela, nearly glabrous except for tufts on mesial surface of dactyl and fine setae on mesial margin of palm. Dactyl and fixed finger each with strongly curved corneous tips crossed when closed; lateral surface of dactyl with numerous tufts of setae; dactyl approximately 1.4 times as long as palm (measured on mesial margin), cutting edge with row of fused corneous teeth and tufts of setae; cutting edge of fixed finger with more or less similarly sized calcareous teeth and tufts of short setae. Palm with dorsolateral margin usually somewhat expanded laterally and well delimited by row of strong arrowhead-like spines decreasing in size distally and continued on fixed finger. Carpus with dorsal, lateral and mesial

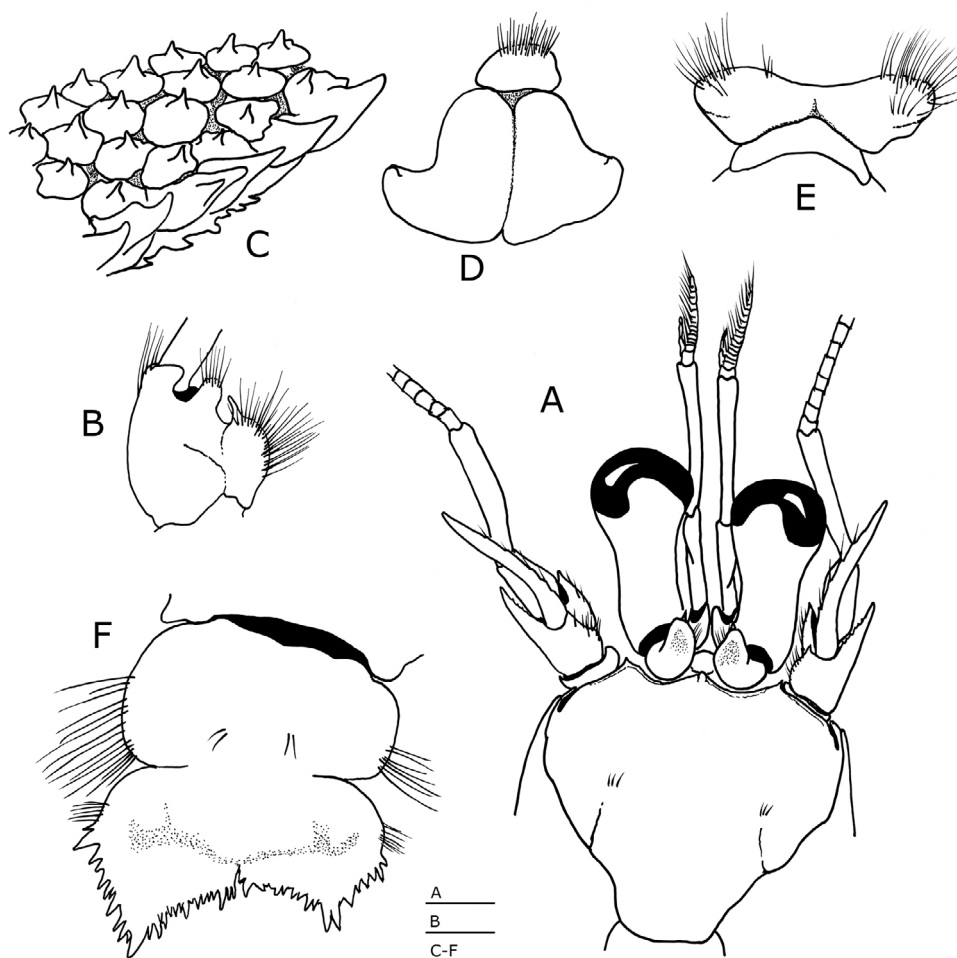


Figure 5. *Pagurus smithi* (Benedict, 1892), lectotype male 7.9 mm, northeastern Pacific, southern Gulf of California, Mexico, USFC Albatross, sta 2823 (USNM 16716): **A**, shield and cephalic appendages, dorsal view; **B**, right basal antennular segment, dorsal view; **C**, portion of dorsolateral surface of right chela near base of fixed finger and lateral margin of chela, dorsolateral view; **D**, anterior and posterior lobes of sternite XI (between third pereopods), ventral view; **E**, sternite XIII (between fifth pereopods), ventral view; **F**, telson, dorsal view. Scales = 2 mm (A), 1 mm (B, C–F).

surfaces sparsely setose, covered with numerous spines; dorsomesial margin with row of strong spines; dorsodistal margin spinulose; ventral surface with small low tubercles. Merus subtriangular in cross-section; lateral and mesial faces fairly smooth; with ventrolateral and ventromesial margins having well-spaced small low tubercles. Ischium with small low tubercles on ventral surface. Coxa with small blunt spines on ventrodistal margin, and row of setae on ventromesial margin. Ischium unarmed, with moderated long setae on mesial surface.

Pereopods 2 and 3 (Fig. 6A–D) similar from left to right. Dactyl broadly curved, approximately 1.8–1.9 times as long as propodus (measured along dorsal margin), dorsal margin armed with small spines proximally, terminating in sharp corneous claw; lateral

and mesial surfaces with median longitudinal crease extending distally from base to about 0.75 times length of dactyl; with dorsodistal and ventromesial row of setae on distal half, ventromesial margin with row of typically 10–15 slender corneous spinules interspersed with shorter corneous spinules on distal half, and tufts of setae on proximal half. Propodus with dorsal and dorsolateral margins sparsely setose, armed with small spines (more numerous and stronger on pereopod 2), otherwise glabrous, smooth. Carpus sparsely setose dorsally, dorsal margin armed with row of strong spines increasing in size distally, dorsolateral surface with small spines or low tubercles; laterodistal margin spinulose on pereopod 2, unarmed in pereopod 3; otherwise glabrous, smooth. Merus with scattered short setae on dorsal and ventral margins; lateral

and mesial surfaces glabrous, smooth; dorsodistal and laterodistal margin spinulose (pereopod 2), or unarmed (pereopod 3); ventrodistal margin with minutes spines or tubercles. Sternite XI (pereopods 3; Fig. 5D) with anterior lobe semicircular, distally setose.

Pereopod 4 (Fig. 6E) semichelate. Dactyl curved, sub-triangular, terminating in sharp corneous claw, with ventrolateral row of minute, fused corneous teeth; with dorsal tufts of long setae. Propodus with dorsodistal tuft of long setae; propodal rasp well developed, consisting of 3–5 rows of ovate corneous scales. Carpus with long setae dorsodistally, otherwise glabrous.

Merus and ischium with setae on ventral margins.

Pereopod 5 chelate. Dactyl with rasp of small scales on lateral surface. Propodal rasp occupying nearly half of lateral face of propodus. Carpus, merus, ischium and coxa sparsely setose. Sternite XIII (pereopod 5; Fig. 5E) subdivided anteriorly into 2 setose lobes (densely setose in ovigerous females).

Pleon with distinct membranous, fleshy protuberance anteroventrally (more developed

towards left side). Uropods strongly asymmetrical, left largest. Telson (Fig. 5F) weakly asymmetrical, with distinct deep transverse suture separating anterior and posterior lobes; anterior lobes with long setae on lateral margins; posterior lobes separated by narrow median cleft, terminal margins forming 2 subtriangular projections armed with strong corneous-tipped spines, each projection terminating in distinctly stronger simple or double spine.

Male with paired gonopores, each masked by forwardly directed setae; with unpaired left pleopods 3–5. Females with paired gonopores; unpaired left pleopods 2–5 (only pleopods 2–4 carrying eggs when ovigerous).

Distribution. Northeastern Pacific, so far only from the Gulf of California and the west coast of Baja California. Depth: 18 to 73 m.

Habitat. Inhabits gastropod shells frequently heavily encrusted with barnacles and anthozoans.

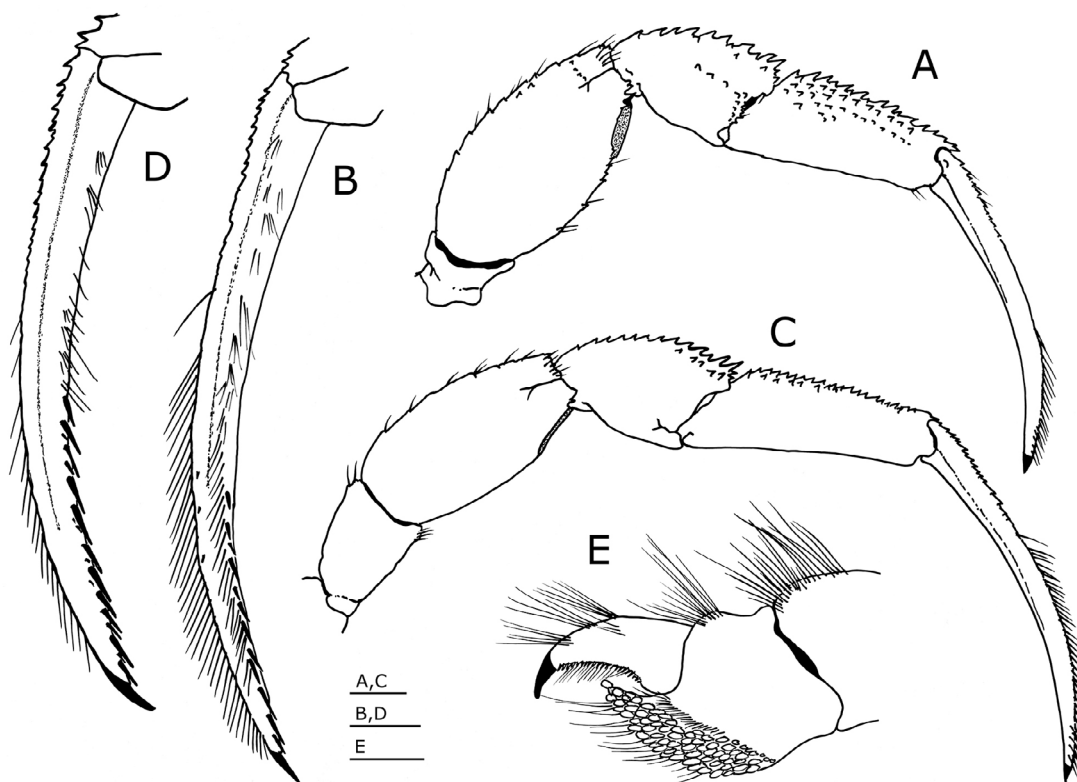


Figure 6. *Pagurus smithi* (Benedict, 1892), lectotype male 7.9 mm, northeastern Pacific, southern Gulf of California, Mexico, USFC Albatross, sta 2823 (USNM 16716): **A**, right second pereopod, lateral view; **B**, dactyl of same, mesial view; **C**, right third pereopod, lateral view; **D**, dactyl of same, mesial view; **E**, propodus and dactyl of left fourth pereopods, lateral view. Scales = 3 mm (A, C), 2 mm (B, D), and 1 mm (E).

Remarks. Benedict's (1892) description of this species did not include illustrations or a list of material he examined. Neither did Benedict give an indication of which specimen was to be designated as the holotype. Benedict specimens came from the collections obtained on USFC Albatross, and thus those must be considered as the syntype series from which a lectotype is herein selected. Since the original description, this species has been reported only by Glassell (1937), Haig et al. (1970), Hendrickx (1993), and Hendrickx and Harvey (1999).

ACKNOWLEDGEMENTS

Credit is due for the writing of this paper to the late Patsy A. McLaughlin, who upon noticing the obscurity and lack of information for the name *Pagurus bouvieri*, suggested that it should be compared to *Pagurus politus* in order to clarify its identity. Indeed, her suspicion has proven correct. Many thanks are extended to my colleague D.L. Felder (University of Louisiana at Lafayette) for taking the time to take the excellent photographs of the MCZ specimens while on a research trip to that museum. Once again, I thank Rose A. Gullege for her assistance, including taking my ink illustrations and preparing the digital versions of the figures.

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