ris). The Nile is the most predictable of the world's great rivers, its basin tapping two major climatic provinces in subsaharan Africa (*Nilquellen). The Nile flood (August–November) reflects the summer monsoon of Ethiopia and the southern Sudan, while the sustained low-water discharge of the post-flood and pre-flood seasons (*Jahreszeiten, *Weltkammer) is sustained by the double, spring and summer rains of Uganda and Tanzania. This blending of waters from several basins assured a perennial transportation artery (*Verkehr) and provided a predictable regime of calendric value (*Kalender, *Sothis); annual flood volume variability was unrelated to climate in Egypt (*Klima). Flood waters filled the natural or artificial flood basins of the Nile valley (*Geographie) and *Delta with an average depth of 1.5 m water for 6–10 weeks during a normal year[2]. This soaking of the soil allows a single, winter crop season, even without irrigation (*Bewässerung), while persistent low-water Nile flow allows additional spring or summer cropping, provided that lift irrigation (*Schaduf, *Saqije) was available[3]. Natural flooding from the Nile channel into the flood basins, through low points in the natural levees and multiple divergent streams (*Bahr el-Jussuf), was increasingly controlled by sluice-gates, canals (*Kanal), and longitudinal/transverse dikes (*Deich) since late Predynastic times (*Skorpion)[4]. The seasonal inundations introduced an annual increment of silt/clay, rich in organic matter and nitrogen, so maintaining soil fertility[5]. Natural or artificial fertilizers were not required (and are not verified) for the single winter-crop (*Getreide, *Gemüse) normal in Pharaonic times except on horticultural plots (*Garten)[6]. Despite the fertility and predictability of the floodplain ecosystem, a single crop season, a lack of non-manual lift devices, and short- and long-term flood volume variation in Pharaonic times imposed severe environmental constraints on agricultural productivity, leading to periodic famine (*Hunger), often of catastrophic proportions[7]. Throughout the upper Nile drainage and southern Sahara the 4th millennium B.C. was unusually wet, followed by strongly negative hydrological trends ca. 2850 ± 100 B.C.[8] (based on C 14 dates calibrated by the Arizona charts)[9]. In Egypt 63 preserved annual records (*Palermo-Stein) from Dyn. 1–5 show a net 1 m decline of flood level during the late 1. Dyn. and 2. Dyn., equivalent to a 30% reduction in flood discharge[10]. A Nile failure is indicated year 14 of *Ninetjer. Subsaharan lake levels remained very low until 1950 ± 50 B.C.[11] A 7-year span of low Niles claimed for the reign of Djoser (*Hungersnotstele) is uncertain because this Ptolemaic work may have been "edited" for political purposes. The low Nile and famine texts dating between *Anchtifi and *Ameni are equally problematic, but the events chronicled by Anchtifi are place- and incident-specific, and inspire some confidence as a record of catastrophic Nile failure[12]. The poor-flood famine and cannibalism reported by *Heqanacht is unquestionably authentic[13]. The Anchtifi and Heqanacht famines lend a certain weight to the lamentations (*Admonitions) that causally link Nile-related drought, starvation, anarchy, and political impotence at the end of the OK[14].

About 1950 B.C. Lake Rudolf was 75 m deeper than now, overflowing into the Nile (Sobat) drainage[15], while White Nile discharge was 10 times greater[16]. There are at least 27 inscriptions in the constricted 2. Cataract area, dating 1840–1770 B.C., that record floods locally 8–11 m higher than now and imply flood volumes 3–4 times greater than the maximum flood since A.D. 1869[17]. These will have resulted in crests 2–4 m above normal in Middle and Lower Egypt, i.e. at least twice the basin water depth of an average year and probably comparable to the catastrophic floods of A.D. 1818–19, when transverse dikes were destroyed[18]. Implications of such destructive floods, capable of destroying the entire irrigation system three times a decade, are momentous. Lake levels in East Africa fell dramatically ca. 1260 ± 50 B.C.[19] and in Nubia agriculture ceased almost entirely after the end of Ramesses II's reign[20]. At Aksha, where floods were 1 m higher than today during the 13th century B.C., dunes spread over the floodplain and a lack of flooding allowed thick salt efflorescences to build up before 300 B.C.[21] Discharge along the peripheral Pelusiac Nile branch declined so much that the Ramessid residence of Avaris (*Pi-Ramesse) was abandoned for Tanis on the larger Tanitic arm, shortly after 1200 B.C.[22] Concurrently, in Egypt, grain prices, with respect to non-food products, began rising under Ramesses III, subsequently reaching 8 times and occasionally 24 times the standard price; the highest prices occurred under Ramesses VII, followed by stabilization during the reign of Ramesses X, with a rapid drop in food prices after ca. 1090 B.C.[23]. In his year 6, Ramesses III made offerings to the Nile at *Gebel es-Silsileh[24], and in year 29 the food supply failed, so that the workmen of *Deir el-Medineh repeatedly rioted; the best efforts of the vizier turned up a bare half of the wheat actually needed, indicating the temple granaries were empty[25]; 5 further food strikes or riots are documented in the next 47 years[26]. Collectively these facts document recurrently poor Nile floods and chronic agricultural underproductivity during the 20. Dyn. and argue for a co-agency of Nile failure in the NK collapse[27]. Nile behavior was not a determinant in Egyptian history but, at a given level of technology, the Nile ecosystem did provide a set of opportunities and practical boundary conditions to productivity[28].

[1] Vgl. H.S.Smith, in: Glimpses of Ancient Egypt (Fs Fairman), Warminster 1979, 163–164; Westendorf, KoptHwb, 51 (ⲉⲓⲉⲣⲟ, pl. ⲉⲓⲉⲣⲱⲟⲩ). – [2] William Willcocks and J.I. Craig, Egyptian irrigation, London 1913, 305f. – [3] Karl W.Butzer, Early hydraulic civilization in Egypt, Chicago 1976, 41ff. – [4] Ibid., 20f., 45ff.; Dunham, in: JEA 24, 1938, 1–8; Goedicke, Königl. Dokumente; Endesfelder, in: ZÄS 106, 1979, 37–51; see also Murray, in: BIE 28, 1947, 33–43. – [5] Jenny, in: Proceedings, Soil Science Society of America 26, Washington 1962, 588–591; Baer, in: JARCE 1, 1962, 25–42. – [6] Butzer, op.cit., 89ff. – [7] Jaques Vandier, La famine dans l'Egypte ancienne, Cairo 1936; Schenkel, Memphis, Herakleopolis, Theben; Barbara Bell, in: American Journal of Archaeology 75, New York 1971, 1–26; Luigi Saffirio, in: Aegyptus 55, 1975, 14–46; Wolfgang Schenkel, Die Bewässerungsrevolution im Alten Ägypten, Mainz 1978. – [8] Butzer, op.cit., 30ff.; Butzer, in: Geographical Magazine 51, London 1978, 201–208; M.A. Williams and D.A. Adamson, in: The Sahara and the Nile, eds. M.A.J. Williams and H. Faure, Rotterdam 1980, 281–304. – [9] P.E. Damon, C.W. Ferguson, A.Long and E.T. Wallick, in: American Antiquity 39, Washington 1974, 350–366. – [10] Barbara Bell, in: Geographical Review 136, London1970, 569–573; Helck, in: ZÄS 93, 1966, 74–79. – [11] Butzer, Early hydraulic civilization (v.n.3), 31ff.; Williams and Adamson, op.cit. – [12] Vandier, Mo'alla, IV, 15ff.; Schenkel, Memphis, Herakleopolis, Theben, 54; Butzer, in: The causes and consequences of food production in Africa, eds. J.D.Clark and S.A.Brandt, Berkeley 1981, in press. – [13] Baer, in: JAOS 83, 1963, 1–19. – [14] Butzer, op.cit. (n.3); W.Kelly Simpson, ed., The Literature of ancient Egypt, New Haven 1973², 212ff.; O'Connor, in: World Archaeology 6, London 1974, 15–38. – [15] Butzer, in: Physical Geography 1, Silver Spring, Maryland 1980, 42–58. – [16] Williams and Adamson, op.cit.; Leonard Berry, in: Hydrobiological Research Unit, University of Khartum, 1960, 14–19. – [17] Barbara Bell, in: American Journal of Archaeology 79, 1975, 223–269. – [18] John Bell, Contributions to the geography of Egypt, Cairo 1939, 231f.; William Willcocks, The Nile in 1904, London 1904, 71. – [19] Butzer, op.cit. (see n.3), 31ff. – [20] Bruce G. Trigger, Yale University Publications in Anthropology 69, New Haven 1965, 112ff. – [21] Jean de Heinzelin, in: Kush 12, 1964, 102–110. – [22] Manfred Bietak, Tell el-Dab'a II, Denkschr. ÖAW 4, 1975, 99ff. – [23] Černý, in: AO 6, 1933, 173–178; Helck, Materialien IV, 619; Jacob J. Janssen, Commodity prices from the Ramessid period, Leiden 1975, 550ff. – [24] Stern, in: ZÄS 1, 1873, 129–135. – [25] Faulkner, in: Cambridge Ancient History II, 2, ³1975, 217–251. – [26] Černý, in: Cambridge Ancient History, II.2, ³1975, 606–657. – [27] Butzer, in: Food Production (see n. 12). – [28] Butzer, in: American Scientist 68, New Haven 1980. K.W.B.

Nilgans (*smn*, ⲥⲙⲟⲩⲛⲉ AkS). Die N. (Alopochen aegyptiaca)[1], ist der einzige in Ägypten brütende Vertreter der Ordn. Anseriformes[2].
Pap. Lansing 3,5–3,8 schildert sie als Ausbund von Schlechtigkeit, der sich als Ernteschädling an *Datteln und *Emmer vergreife und die eben ausgeworfene Saat vernichte. Dazu lasse sie sich nicht fangen (*Vogelfang), werde nicht als *Opfer im *Tempel dargebracht, sei scharfsichtig und verrichte keine Arbeit[3]. Letzteres verweist sicher auf die Tatsache, daß die N. nicht domestiziert wurde (*Domestikation, *Lieblingstier)[4].
Für die *Ernährung spielte die N. daher eine im Vergleich zu anderem *Geflügel bescheidene Rolle (*Geflügelzucht, *Mästen)[5]. Sowohl *Medizin[6], als auch *Magie[7] verwendeten ihr *Blut bei ihren Rezepten. Im pWestcar vollbringt der Zauberer Djedi an einer N. das Kunststück, einen abgehauenen Kopf wieder anzusetzen[8].
Umgekehrt proportional zur Bedeutung der N. im profanen Bereich ist die in der sakralen Sphäre. So figuriert sie in einem zur Bekräftigung der königlichen Macht dienenden *Ritual[9]. In den *Pyramidentexten fliegt der *König in Gestalt einer N. zum Himmel, *Sargtexte und *Totenbuch zeigen den Toten als „schnatternde (*ngg*) N.", also als *Urgott „Großer *Schnatterer", aus dessen *Ei die Welt hervorging[10]. In diesem kosmogonischen Aspekt kann auch *Amun die Erscheinungsform einer N. annehmen. Beziehungen zu *Horus erweist der Ortsname *Smnw-Ḥr*[11].
Mit derartigen Zeugnissen wird auch der *Personennamen „N." verständlich[12].

[1] Zur Systematik: *Fauna, *Gans. – [2] Edel, in: NAWG 8, 1961, 234. – [3] LEM 102; Caminos, LEM 381f. Die Passage zeigt präzise Beobachtungen. Zur Durchtriebenheit der N. s. auch Aelian V, 30. – [4] Joachim Boessneck, Die Haustiere in Altägypten, Veröff. d. Zool. Staatssamml. München 3, 1953, 34. – [5] Boessneck, a.a.O.; Helck, Wirtschaftsgeschichte, 15; Barta, Opferliste, 29. 53. 89. 131f. "Cette Oie fut de tout temps respectée, peut-être parce qu'elle est immangeable!": R.D. Etchécopar–François Hüe, Les oiseaux du Nord de l'Afrique, Paris 1964, 89. „In Ägypten jagen Türken und Europäer die Nilgans; im Ostsudan scheint sie nur in den Adlern und Krokodilen gefährliche Feinde zu haben. Das Wildbret unterscheidet sich, soweit ich zu urteilen imstande bin, nicht von den anderen Wildenten": Brehms Tierleben, Bd. 6, 4. Aufl., Leipzig 1926, 252. – [6] Grundriß der Medizin VI, 441. – [7] pMag. LL, col. X, 31. – [8] Brunner–Traut, Märchen, 18. – [9] Jean-Claude Goyon, Confirmation du pouvoir royal au Nouvel An, BdE 52, 1972, 79. – [10] Friedrich Abitz, Statuetten in Schreinen als Grabbeigaben in den ägyptischen Königsgräbern der 18. und 19. Dynastie, ÄA 35, 1979, 94ff. – [11] Yoyotte, in: RdE 13, 1961, 82ff. – [12] Ranke, PN I, 307.

Lit.: Charles Kuentz, L'oie du Nil, Archives du Mus. d'histoire naturelle de Lyon 14, 1926. S. auch *Gans.

L.St.